AND

JOURNAL

OF

Rural Art and Rural Taste.

DEVOTED TO

HORTICULTURE, LANDSCAPE GARDENING, RURAL ARCHITECTURE
BOTANY, POMOLOGY, ENTOMOLOGY, RURAL ECONOMY, ETC.

CONDUCTED BY

J. JAY SMITH,

Editor of the N. A. Sylva.

VOLUME XIV.—JANUARY TO DECEMBER, 1859.

LIBRARY
PRINCETON N. J.

NEW YORK:
PUBLISHED BY C. M. SAXTON, BARKER & CO.,
No. 25 PARK ROW.
1859.

EDWARD O. JENKINS, PRINTER,
No. 26 Frankfort Street, New York.

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Parlour Cultivation—Ferns.

"In princely halls and courts of kings
Its lustrous ray the diamond flings,
Yet few of those who see its beams,
Amid the torchlight's dazzling gleams,
As bright as though a meteor shone,
Can call the costly prize their own;
But gems of every form and hue
Are glittering here in morning dew;
Jewels that all alike may share
As freely as the common air."

E are glad to see that the taste which has sprung up among the ladies for hanging baskets of growing plants, is extending itself to Wardian cases and Aquariums. We would not insinuate that a cultivated woman was not the greatest attraction a drawing-room can present; but when we see adornments of living plants in a living apartment, the first impression that a cultivated mind inhabits it is rarely erroneous. No matter how simple the vase, or how common the flower, if the first is neat and the second in health, we know that it is a matter of interest; we also soon discover that cultivation of the mind is in progress; that the caretaker reads, observes as she goes, and enjoys accordingly. A plate of moss under a simple glass vase, or even exposed and well sprinkled thrice a day, attracts us; and we feel at home here, a thousand times more than in the presence of gilded furniture or the most expensive or-molu ornaments.

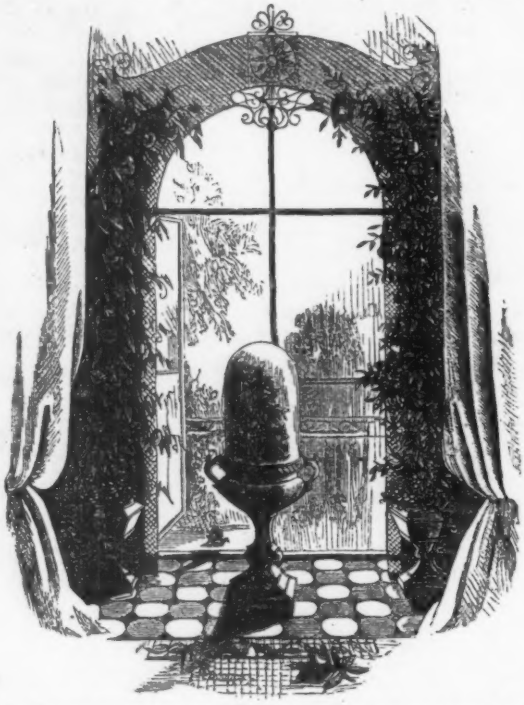
When once the mind receives pleasure from such cultivation as can be accomplished within doors, it is surprising how readily we learn the simple conditions of health which plants require; that difficulty conquered the pleasure daily grows by success, and *home* becomes a place of delight; the aid of books brings new thoughts, new pleasures; the possessor no longer seeks in vain show, admiration from abroad; her love turns to her pets whose daily progress is the theme of thoughts gradually growing in intensity till curiosity is awakened, and she gains a life-long pleasure in the study of nature's works; exclaims "Who would live contentedly, or consider a sitting-room furnished, without either a Ward's case or an Aquarium?"

As to outlay and trouble of management these are the cheapest and most interesting adornments of a dwelling-house. The expense may be considered at an end when the case has been purchased and stocked; after that the less it is touched the better; dust cannot creep into its crevices, to mar the freshness of the gems within, while daily, whether in library or boudoir it is an object of intense interest.

A simple plan is to procure a vase of any material and throw over it a glass shade, as represented. Ferns grown within, exceed greatly the beauty of those grown in the open air. Though we cannot have the moun-

tain dells, the creeping woodbine coverts or the rocky water-fall, we may have the emblems of them in our little rural paradise; we may have the Ferns to suggest such things when frost and snow cover all nature's bosom, and to keep in remembrance the pleasures of the scenes of spring; remembrances of fragrance from the green world that sweeten the oft otherwise weary pilgrimage in the march of life.

It must be a pure and simple taste which finds pleasure in the culture of plants with no gaudy blossoms to attract vulgar remark, which have few claims on our attention beyond their botanical interest, and chaste, simple, outlines, their rare shades of green and brown, and methods of growth



neither noticed nor cared for by minds unschooled to simple elegance and exquisite delicacy of form.

Procure your ferns in country rambles in the vicinity of the woods, along the banks of brooks where there are many decayed tree trunks, and amongst rocks. In removing these it is necessary to dig out the root-stock in as complete and uninjured a state as possible, and if a portion of the soil can be brought away with the plant it is all the better. A tin box to bring them home in, covered over with wet moss, is useful; plant as speedily as possible, using potsherds for drainage, keep them in the shade, and moisten the earth occasionally. The small ferns are most suitable for parlour culture.

In gardens, select a shady, moist situation, and with a little care you may have as fine a hardy fernery as you can desire. The soil which suits most ferns, is three parts of rather light fibry earth, and one part fibry loam; but the beginner cannot err who employs the earth the plant was found luxuriating in out of doors. It need not be made fine, but used on the surface in pieces varying in size, the finer near the roots, the surface as rough as in nature's treasury.

We do not urge these pleasures on any; but certain we are, that few more refining ones can be pursued. The mind gradually learns

> "To mark the structure of a plant or tree,
> And all fair things of earth, how fair they be."
>
> CHARLES LAMB.

A few good specimens of mosses add greatly to the appearance of a fernery, particularly if some of the scarlet caps be introduced. Ferns and mosses seem naturally to be inseparable companions, and should not be parted; a fact enunciated in the following lines, which contain a valuable moral:

FERNS AND MOSSES;

OR, THE LINKS BY WHICH SOCIETY IS HELD TOGETHER.

"There was Fern on the mountain, and Moss on the moor—
The Ferns were the rich, and the Mosses the poor;
And the glad breeze blew gaily—from heaven it came—
And the fragrance it shed over each was the same;
And the warm sun shone brightly, and gilded the Fern,
And smiled on the lowly born Moss in its turn;
And the cool dews of night on the mountain Fern fell,
And they glistened upon the green Mosses as well.
And the Fern loved the mountain, the Moss loved the moor
For the Ferns were the rich, and the Mosses the poor.
But the keen blast blew bleakly, the sun waxèd high—
Oh! the Ferns they were broken, and withered, and dry;
And the Moss on the moorland grew faded and pale;
And the Fern and the Moss shrank alike from the gale.
So the Fern on the mountain, the Moss on the moor,
Were withered and black where they flourished before.
Then the Fern and the Moss they grew wiser in grief,
And each turned to the other for rest and relief;
And they planned that wherever the Fern roots should grow,
There surely the Moss must live sparkling below.
And the keen blast blew bleakly, the sun waxèd fierce—
But no winds and no sun to their cool roots could pierce,
For the Fern threw her shadow the green Moss upon,
Where the dew ever sparkled undried by the sun;
When the graceful Fern trembled before the keen blast,
The Moss guarded her roots till the storm wind had passed.
So no longer the wind parched the roots of the one,
And the other was safe from the rays of the sun.
And thus, and for ever, where'er the Ferns grow,
There surely the Mosses lie sparkling below;
And thus they both flourish where nought grew before,
And both deck the woodland, the mountain, and moor."

THE NEW GRAPES.

BY CHARLES DOWNING, NEWBURGH, NEW YORK.

I PROPOSE to offer a few remarks concerning some of the new recently-introduced native grapes, because there are contradictory opinions advanced of some of them that are pretty well established here.

DELAWARE—First I would notice the Delaware as that at least has been more fully tested than the others. When I first saw it (some five or six years since) I was so favorably impressed with its beauty and excellence, that I immediately procured a vine and recommended it to my friends, being confident from the ripening of the wood almost to the ends of the shoots, that it would prove hardy and be an acquisition on account of its earliness as a first-rate table and dessert fruit, profitable for marketing and vineyard culture. At first it was small in berry and bunch and apparently but a feeble grower, having been subjected for many years to unfavorable circumstances which had dwarfed its habit, but not entirely obscured its excellence. But our friend A. Thompson of Delaware, Ohio, who under such unfavorable circumstances did not fail to detect its fine qualities, and who first brought into notice, deserves the thanks of every lover of good fruit. And now that the prediction made to my friends upon its first introduction has been more than realized, I will venture another; that is, the time is not far distant, perhaps at our next Pomological Congress, when all will esteem it a pleasure to award praise to a deserving public benefactor. It is not, too, a feeble grower and so unproductive as has been represented, as a few statistics will show. My own vine, without any extra cultivation, has made a fine, growth of well ripened wood, and presented a mass of thoroughly ripened fruit, such as is seldom seen on any other native variety of the same age; but before I counted the bunches they were stolen and the loss keenly felt. My adjoining neighbor has a vine four years old which has borne this season 70 bunches of well ripened fruit proving very satisfactory, and $100 was offered for the vine but refused. Another neighbor, on a vine of five years of age with twenty shoots averaging ten feet in length, has 60 bunches, that for size and beauty were a sight worth going many miles to see. Another adjoining neighbor has vines commencing to bear freely, and last fall he showed his opinion of the grape and his regard for a most interesting family of children, by purchasing fifty more Delaware vines for his family use; they were good vines and well treated, and under such management never disappoint the grower. Of the quality of its fruit all who became acquainted with it agree in awarding it the highest praise; it is sugary, aromatic, and refreshing, and never cloys.

DIANA.—Of the Diana it would seem superfluous to speak; still its character is often misunderstood, and it is often called a feeble grower; whereas it is one of the most vigorous; and that, with its disposition to early overbearing, is its chief fault. From a good stock its bunches and berries are even at its first bearing large, but the fruit improves greatly in size and quality and gains much in earliness as the vines acquire age. It begins to color and be very good to eat almost as early as the Delaware, but does not, like that, hasten to full maturity and on the deep, rich, dry soil in which it delights it will continue to improve to the end of our longest and dryest seasons, when its fine qualities will surprise those who have only been acquainted with the Isabella and Catawba.

Both this and the Delaware must still be regarded as in the progressive state, each season more fully developing their superior qualities ; and the past and present season, so unfavorable for developing the flavor of grapes has afforded us the test to place them in the highest rank.

The HERBEMONT has been long known and highly prized at the South, particularly in Georgia and Carolina ; but is very little known north of Delaware, although forty miles north of New York it has done well the two past unfavorable seasons; and a vine in Newburgh, in a sheltered yard, has not failed for years of giving most abundant crops of delicious, spicy fruit, whose berries are bags of sweet wine. The Herbemont, besides giving excellent fruit, is valuable for ornamental purposes; being unequaled in vigor, and beautiful in its wood and foliage. It needs protection in winter and will not generally ripen its fruit in the open ground north of New York, except in sheltered situations. In consequence of its greater vigor it requires more room than other varieties.

ANNA.—I am now inclined to say a few words respecting one that is not yet fully before the public; I refer to the Anna; and it might properly be called the Anna Muscat, as the flavor reminds one of the Muscat of Alexandria. It fruited for the first time while my late brother was living, who thought highly of it, as well for its high flavor as for its beauty and color. The vine was purchased and removed, and like the removal of most old vines did not succeed well, giving no good fruit and not very healthy wood. I have observed its progress during the past few years with much interest. The vines that have been grown from it are vigorous and healthy in habit, much like Catawba, but with a thicker and more firmly fleshed leaf, which enables it better than any other except Delaware, to resist mildew. It also ripens its wood early and has so far proved perfectly hardy. Its bunches and berries are large and only moderately compact in this respect, much like Catawba, peculiarly dotted and covered with a fine bloom. The color varies from greenish to pearly white, and sometimes light amber. The flesh is juicy and has generally a considerable degree of adhesiveness at its centre, but much less acidity than the Catawba. The flavor is rich and peculiar, but sugary, vinous, and spicy, with a fine pleasant aroma. It ripens fully as early as the Isabella; but like the Catawba, continues to improve to the end of the longest season.

REBECCA, which formerly promised so highly, I must not fail to notice by an encouraging word. Notwithstanding the difficulties it has had to contend with (and excessive propagation is the greatest), yet I believe that any one who gets a good taste of this fine and very rich fruit will be unwilling to be without it. The past remarkably unfavorable season has caused some mildew to its leaves, but not more than to that old standard the Isabella; and this should cause little distrust to its value, because when the vines become older and stronger they will be better able to withstand the changes of the seasons. Its foliage is not very abundant, consequently its fruit bearing should be moderated by thinning, and its treatment should be that of a garden rather than of an open vineyard variety. It is still new, and not fully tested out of the garden, in which it originated, and requires time to enable it to take rank as the American Chasselas.

HARTFORD PROLIFIC.—At the meeting of the Pomological Society held at Rochester in 1856, I spoke somewhat in praise of this grape, as it appeared to be underrated by many of the members who compared it with Charter

Oak, &c. I consider it valuable, chiefly for its hardiness, abundant bearing and earliness, as it ripened this season earlier than any other variety in my collection. In quality it does not equal Isabella, but is desirable to come in for early marketing in small quantities and especially for the north. There is, however, an objection to it: as soon as *fully* ripe it drops from the bunch.

Union Village.—This variety has not yet fruited here; it is very vigorous in its growth, but so far as tested, has not proved as hardy as the other native grapes, but it may become so when fully established. Its fruit is larger than Isabella and a little earlier.

York Madeira.—A hardy grape, ripening its wood well, growth moderately vigorous, very productive; bunch and berry of medium size, very compact, of pretty good quality, ripening a few days before Isabella. Hyde's Eliza, Canby's August, and also Baldwin's Early, as I have received it, so strongly resemble the above as to lead to the opinion that they are identical with it.

Clara.—This new grape has just commenced bearing, and gives promise of much excellence. It is vigorous and appears hardy; bunch large; berry good size, color white and flavor excellent. It requires more time to give a decided opinion of its real value, but I think highly of it at present.

WINTER FLOWERS—THE OXALIS.

This beautiful tribe of plants, deserve more attention than they generally receive. As winter flowering green-house plants we value them very highly; and they bloom most profusely even where the temperature is not kept sufficiently warm to flower heliotropes. We place great value on them and the Chinese Primrose for green-house blooming, as both are easily managed and flower well, without extra care or cultivation.

Sometime during the month of September we shake out the bulbs from the pots they have occupied during summer, and having prepared some good potting soil (we use rotted sods as our only compost or soil for potting all our plants) the roots are set in 4 or 6-inch pots; we usually place the smaller growing kinds rather thickly, as they sooner fill up the pot, but finer flowers are produced from good sized single roots. After potting, they are set in the green-house, on the front shelf, or anywhere most convenient, as they will not begin to form leaves for a week or two.

Very little water is required at this period, indeed for a week or two the soil will afford sufficient moisture, if watered immediately after planting. Wet soil will prove very injurious and prevent the growth of roots, but when the soil is rather dry the bulbs seem to root more readily and they certainly grow with more vigor; a good and regular supply of water will be requisite when once the growth has become vigorous and the foliage plentiful. After they are over the flowering period, less water will again be requisite, and a period of rest follows the dying down of the foliage, during which time the soil should not be watered, unless the pots are fully exposed to the sun, we plunge them in the soil, behind an arborvitæ hedge, where they rarely receive any further care until we look them up for potting in September.

There are numerous kinds, all are pretty; many of them, such as Bowii, exceedingly so. O. hirtella; O. lutea; O. pulchella; O. lepida; O. purpurea; O. rubro-flava; O. geniculata, and O. versicolor, are some of the best that we have been able to flower from time to time.—W., *Bloomhill.*

PATENT SILICIOUS STONE, ETC.

This material appears to have become a considerable article of manufacture at Ipswich, in Suffolk, England. It is called Ransome's Patent Silicious Stone, respecting the excellence of which for durability, cheapness, and the ease with which it can be moulded into any required design, Professors Ansted, Faraday, and Sir Henry De la Beche have given very high testimonials. It is prepared by an entirely new process, being to all intents and purposes a sandstone of excellent quality. The cost of sculpture is saved by the moulding of it to the required form in the process of its production. That it is cheap may be inferred by the fact that the fountain here engraved from one of Mr. Ransome's designs, is sold, exclusive of rock-work for about forty dollars, its entire height being five feet from the base. Some years ago Austin's Patent Stone was introduced by one of his workmen in our northern cities, but it did not stand the climate. We believe Ransome's is entirely a superior article, and hope to hear of its introduction.

Other materials are now employed for useful purposes in place of real, solid, costly stone, to which we can only call attention. There is a substance called Rangoon tar, and a pitch at Trinidad possessing remarkable properties. A pitch lake produces an article already much used as an Anti-oxide Paint, for the bottoms of ships, for metal pipes, roofs, &c., but its applications are many, defying as it does the sun and the waves. This melted pitch may be mixed with other materials, and light stones coated with it become as hard as granite; it is a good substance for repairing under-water foundations. It can be cast into water-pipes more durable than iron, and at less expense, and without risk of imparting any offensive taste to the water. This has been successfully done and Port Spain is supplied with water very economically with such pipes.

Rubble is now made economically in France with concrete, as it was by the Romans, not only for foundations but for large domes and arches. The cement works at Vassy now produce cement for this purpose to the amount of one hundred and fifty thousand dollars a year. The bridges at Paris have been repaired with it, two having been built entirely of it in a very short time. Mr. Rennie, the civil engineer has brought the subject prominently forward in England and has shown that concrete may be much more extensively used in engineering and other works than it is at present.

There is another article by which damp and water are set at defiance; it is called Water-Glass, or oil of Flint. It is a preservative against fire, a good glaze, stiffener, &c., a varnish for metal pipes, rendering them as

smooth and clean as glass. A Water-Glass Company has been formed in England to give full effect to the invention.

Wood also claims attention. Portable Swiss châlets are constructed by machinery, so as to be erected in any spot in three or four days. Capital things for folks who want a temporary residence, while trying whether a locality will suit them or not: they may now carry their house with them from place to place. A sportsman may have a picturesque shooting lodge set up for his sojourn, or an angler a fishing-lodge, or boat-house, fashioned to suit the landscape. And now that wood can be rendered all but imperishable and fire-proof, wooden châlets may be occupied with safety.

ENGLISH STRAWBERRIES *versus* NATIVES.

BY D. M. RICHARD, WASHINGTON, D. C.

In the April number of the last volume, Mr. Saul in speaking upon strawberries, asserts that the foreign varieties succeed better in the vicinity of Washington City, than our American sorts.

That "Doctors will differ" is an old saying, and one that holds good in almost every profession. From my own observations I am compelled to differ with Mr. Saul, that the English varieties are superior or even equal to the leading American varieties, even in the "District of Columbia."

To make any fruit profitable for market there are several things requisite, fine flavor, good size and appearance, hardiness, regular and good crops with the *least labor*, and the nearest we can have all these qualities combined in one fruit, the more profitable it is. Now how will strawberries compare with this standard.

For some years past the Alice Maud, has been grown more extensively for the Washington Market than any other variety, Hovey's Seedling excepted, and how does it compare with the "little scarlet;" it burns out in summer, freezes out in winter, the fruit is deficient in color and flavor and has nothing to recommend it but its size, and in very favorable seasons bearing a good crop of fruit. I have frequently seen them selling for twenty cents a quart, when Hovey's would be bringing fifty cents.

As for the Victoria and Kitley's Goliath, they may have done well in 1857. I saw them the last season a perfect failure, while Hovey's Seedling, Prince's Magnate, McAvoy's Superior, and several other American varieties aside of them were loaded with magnificent fruit.

Dr. J. H. Bayne, a horticulturist of high standing and perhaps the most extensive orchardist and strawberry grower in the neighborhood of Washington, has tried several hundred foreign varieties, and that too under the most favorable circumstances, and he has thrown them all away as worthless for our climate, not finding one that would compete with our best natives.

There is no doubt that with equal cultivation our leading American strawberries will throw every foreign variety far in the back ground as a profitable market fruit. Such has been the experience of Dr. Bayne, and if I am not mistaken, such is the opinion of Mr. Cammack, and nearly every strawberry grower in the neighborhood of Washington City.

A PLEASING SCENE.

BY A. W. D., MONTREAL, CANADA.

Did it strike you, Mr. Editor, when you were tracing so truthfully the pictures on the side of our beautiful mountain, what fine opportunities the declivities below some of our best houses presented for terraces and balustrades? There could be nothing made to the hand more attractive for the purpose. Pray insert the following ideal landscape, and let us see if some one of our wealthy men of taste will not attempt something like it. A flight of stone steps leading to a second terrace of double the width of the first, and laid out as an elaborate flower garden on a ground of turf, with fountains, statues, vases, and one or two highly wrought tables and seats

of elegant patterns, would be most effective. Descending the steps you would face the finest views of the St. Lawrence, the tubular bridge, the distant hills and mountains, and all the charms of landscape here displayed with such a lavish hand. "Ah! Bellagio! how well I remember thee!"

HORTICULTURAL COURTESY.

To one whose knowledge of human nature has been derived from intimacy with men in the crowded avenues of trade, the noisy political caucus, or the contaminating precincts of the bar-room, the country and rural pursuits seem eminently fitted to develope all the finer elements of man's nature.

Wearied with the city and all its evils, he procures a country home and devoting to its improvement all the appliances of a cultivated intellect, he sees growing around him his crops, his trees, and his garden, and in the intense enjoyment resulting from his pursuits, he feels his moral and religious nature, and his aesthetic qualities developing to a degree that is perfectly wonderful to himself. He thinks the result must be the same with others,

and with his own heart full of the warm feeling of good fellowship, he mingles with nurserymen, gardeners, and horticultural editors. Among them he finds some whose minds have been developed as his own, but among a large class he is startled and shocked to find jealousies, bickerings, bitter and insulting words, and a degree of ill nature that put to flight all his nice theories respecting the soul enlarging and elevating tendencies of Horticulture. His theory was a fair deduction from a sound philosophy, but unfortunately not sustained by fact.

These jealousies and bickerings of those who either sell or write about plants for a living, has destroyed many promising Horticultural Societies through the country, prevents the success of those in one of our largest cities, and would effectually destroy another were it not for the rich endowment which holds it together. I have been led to think of these things by an article in the November number of Hovey's Magazine upon Dwarf Pear culture, in which "whining" and other opprobrious and insulting epithets are applied directly to the editor of the *Horticulturist*, and indirectly to all whose expressions are adverse to Dwarf Pears.

The whole article is so abusive that I am unwilling to believe it to be from the pen of the Editor, but rather from some one who has no conception of such qualities as courtesy, good breeding, and gentlemanly language. The Editor owes it to himself as well as the Horticultural world to explain why such an article obtained admission to his columns.

Unless Horticultural Magazines will steadily avoid all personalities, the Editors may rest assured that no man who has any self respect will write for or read them.

Editors may respond that they do not care for this, but they have no right to deprive the horticultural public of the opinions of experienced men.

What is the whole history of this Dwarf Pear controversy ?

Some nurserymen and amateurs about Boston were successful in growing Dwarf Pears in their gardens, under high culture. A nurseryman on Long Island, charmed with the results he saw at Boston, planted ten years ago an orchard of four acres of Dwarf Pears. He ploughed deep, manured highly (about $100 of stable manure to the acre), selected trees of the best quality of the five best sorts recommended by the President of the Massachusetts Horticultural Society, and gave them throughout full garden culture. The first two or three years were highly encouraging. The trees grew so luxuriantly, and bore so abundantly that he considered the question settled, and wrote an article for the *Horticulturist*, accompanied by an array of figures to prove that orchards of Dwarf Pears were profitable beyond all previous calculation.

This article was widely copied and inserted in a book on Fruits prepared by a well known Nurseryman at the West, whose sales of Dwarf Pears were doubtless largely increased by it, for people will be taken by figures, however deceptive they may sometimes be. A year or two subsequent to this, however, the writer's orchard began to flag. Being rather a pet, it was cared for in every possible way, fed, nursed, trimmed, and trained, but all was of no avail, and the writer after ten years was forced to admit that he was mistaken, and to feel that in common honesty he was bound to tell it to the public, although a part of his business was to sell dwarf pears. He did tell it. He was preceded and followed by others who told the same story. Men from Pennsylvania, New York, and elsewhere, who had ex-

pended large sums upon Dwarf Pear culture, and *who had no possible interest in giving a false impression.*

One would think that these gentlemen had a perfect right thus to express their opinion, and that in this expression they were entitled to common courtesy. Reasonable men would readily understand that Dwarf Pears might succeed about Boston if they would not succeed any where else, that they might succeed in a garden, while they would fail with orchard culture. But our Massachusetts friends were not willing to hear a word against their favorite dwarf, and were as much surprised that New Yorkers and Pennsylvanians could not grow Dwarf Pears, as the Feejee Islanders would be that they could not grow Bread fruit.

They said it was owing to poor culture, while some of them at least knew that an amateur near Hempstead, Long Island, of large wealth and quicker intelligence, had experimented as largely with all the varieties, and cultivated as highly as any fruit grower in Massachusetts, and for a long series of years, and is now compelled to give up Dwarf Pears as unsatisfactory.

If these Massachusetts gentlemen should simply say, "it may be that the climate and soil of other localities does not suit Dwarf Pears, but we know that *we* can grow them profitably," it would be all very fair, but when their best pomologists stigmatize all expressions adverse to their favorite as attempts to "*write down*" Dwarf Pears, then their position becomes offensive and discourteous. They must see that if fair expressions of opinion are so characterized, it will soon be difficult to elicit any horticultural information from those best qualified to give it. It was evident to thinking men at the late Pomological Convention, that this spirit of intolerance was increasing, and unless checked would destroy the usefulness of that organization.

The whole tone of this Pear controversy has been unfortunate. We once indulged the hope that the courtesies and amenities recognized among gentlemen, would generally prevail among all interested in Horticulture. The article which has furnished our text, does not give us much encouragement.

We hope, however, that such may not be frequent, and that every cultivator of trees and plants will always remember that in the mysterious processes of nature, success is not always the test of truth; that while climate and soil differ, there will ever be different results, and that no man or community of men can justly claim all knowledge or all experience, or announce to the world that wisdom dies with *them.*—S. B. P., *Flushing, L. I.*

GRAPES.

Mr. Editor: Mr. John Fiske Allen, in your November number page 516, writing about grapes, remarks: "I have never been able fully to satisfy myself that there really was any permanent difference between the White Nice and Royal Muscadine." It is quite certain the grape cultivated under the name of Nice by Mr. Allen, is not the same as grown under that name in England.

Turning to Mr. Rivers' Catalogue (an excellent authority) I find it described thus: "Berries round; medium size; greenish white; sweet

and agreeable; not rich; bunch very large, often weighing several pounds." This agrees with Thompson in his description of the variety cultivated at Chiswick.

The Horticultural Society, at great labor and expense cultivated fruits from all available places, fruited and corrected the nomenclature, and we may safely suppose they are as near correct as possible.

More than twenty years since I have seen this variety cultivated, and in great perfection. It agreed in all particulars with the description of Mr. T. Rivers. An average bunch of this grape is fully six times as large as an average bunch of the Royal Muscadine. In fact, it has the largest bunch of any grape I have ever seen; not excepting Syrian, Muscats, Damascus, Palestine and others. The berries are small for a bunch of such a size—not larger than a Royal Muscadine. When fully ripe they are scarcely of as deep an amber color, and are greatly inferior to it in flavor. Indeed, it is considered in this latter quality as very poor. It has very large shoulders. In England it is very little cultivated, as it has nothing to recommend it but size of bunch.

Royal Muscadine is universally cultivated by grape growers in England, and under its other name Chasselas de Fontainbleau, in France; and is considered the same grape by Thompson, who had opportunities of growing plants and fruiting from various sources, and in this the leading grape growers in England agree with him.—JOHN SAUL, *Washington, D. C.*

GOLD AND SILVER FISH.

BY B. TAYLOR.

As an ornament in gardens or pleasure-grounds, a fountain and basin, or small piece of water, stocked with gold and silver fish, is generally admired, and justly so, especially when we consider the exotic appearance and great beauty of these species of the finny tribes. I seldom see them disporting in their own translucent element without considering their "culture" an index of refinement and taste. Although, perhaps, not directly connected with the pursuits of gardening or flowers, yet there being now so many persons who keep them in the house, along with favorite plants, ferns, etc., or in their grounds, and as their management is but imperfectly understood by many, a few words on this head may not be out of place in your widely-read work.

These beautiful kinds of fish are varieties of a kind of carp (*Cyprinus auratus*), natives of China. There are indeed so many different kinds belonging to this species, that M. de Sauvigny published a work (*Paris*, 1780), in which he gave colored representations of eighty-nine varieties, of every different shade of gold, silver, orange, brown, and purple. They vary also in their tails, which are sometimes double, and sometimes triple; and in their fins, which are much longer and larger in some varieties than in others. The gold fish was first brought from China to the Cape of Good Hope by the Dutch, about 1611; and a few specimens were soon after purchased at an enormous price by the Portuguese, who appear to have first brought it to Europe. The Dutch continued for some time to sell their fish at exorbitant prices; but, breeding rapidly in Portugal, the Dutch soon lost

their monopoly, and the Portuguese for many years supplied gold and silver fish to the rest of Europe. In France, the first seen are said to have been sent as a present to Mademoiselle de Pompadour, about 1730; when the French courtiers were so enchanted with the splendor of this new kind of fish, that they called it *La Dorade de la Chine*, a name it still retains throughout France. The French have, however, now so completely naturalized this fish in the Mauritius, that it is served at table with the other kinds of carp, which it greatly resembles in taste, though it has a more delicate flavor.

Though the gold fish is a native of a very hot part of China, and though it appears to enjoy the heat of a pine stove or orchideous house with us, yet it possesses the power of resisting a great degree of cold. Some years since Professor Host, a well-known naturalist in Vienna, chanced to leave a glass globe containing a gold fish in the window of a room without a fire, during one of the coldest nights of a very severe winter. In the morning he recollected his poor fish, and examining the glass, he found the water frozen apparently quite hard, and the fish fixed immovably in the centre. Supposing the fish to be dead, he left it in the ice; but, as it was extremely beautiful, he took a friend to look at it in the course of the day, when, to his great surprise, he found that the water had thawed naturally, from the room becoming warm by the sun, and that the fish was quite lively, and swimming about as though nothing had happened. The friend of M. Host was so much struck with this remarkable occurrence, that he tried a similar experiment; but bringing his frozen fish to the stove to hasten its revival, the fish died.

Gold fish live a very long time. A few years since there were some in a large marble basin belonging to the Alcazar of Seville, which were known to have been there more than sixty years, and which are probably still existing, as they then showed no signs of old age. They were indeed particularly active, though larger than usual, and of the most vivid colors. It was, however, remarkable that they were all of nearly the same size; and this is generally the case with all gold fish kept in clear water, as they never breed in such situations. It has also been remarked, that gold fish kept in glass seldom increase in size, particularly if the vase or globe in which they are kept be small. A curious experiment to ascertain the truth of this remark was tried some years ago in Paris. Two or three fishes a year old, which measured two inches long, were put into a glass globe exactly one foot in diameter. The water was changed every second day in summer, and every week in winter, as is usually done with gold fish kept in glass vessels, and they were occasionally fed with crumbs of bread; but in eleven years they had not increased one line in length. They were then taken out of the globe, and thrown into a pond in the garden, where there were no other gold fish; and when this pond was drained at the end of ten months, the gold fish were found to have increased in length, one about four inches, and the other nearly five. It has been before remarked, that gold fish never breed in clear water; and it has been observed that when they do breed, the young conceal themselves among the roots of plants, in inequalities of banks, or among the faggots which may have been put in for them. A lady who happened to pull up an aquatic plant which had grown on the bank of a pond in which there were some gold fish, was quite astonished to find the roots appear alive; and on examining them, she dis-

covered the movement to be occasioned by a great number of little dark-brown fishes which were sticking to the roots. These little fishes were the fry of the gold carp, which are taught by instinct to conceal themselves from the old fish till the golden hue begins to appear on their sides, which it does when they are about an inch long. It is said that the gold carp devour the fry of other fish, and also their own, if they see them before the golden blotches appear.

When it is wished to breed gold fish in clear water in a tank or basin, a few faggots should be thrown into the water; or a sloping bank of gravel should be raised in the tank, the upper part of which is near the surface of the water. This will afford at once a situation for the old fish to deposit their spawn, and a shelter for the young fry. Some persons, when the spawn has been deposited on a faggot, remove the wood to another tank to rear the young; but they always do better, and grow faster, when bred in a pond with an earthy bottom, and in which plants grow naturally.

In keeping gold fish in ponds, no care is requisite but that of sprinkling a few crumbs of bread occasionally on the surface of the water to feed them; but when they are kept in any small vessel, the water should be changed regularly, not only for the sake of cleanliness, but because the fish will have exhausted the water of the animalculæ, which serve them as food. The usual rule is to change the water in glass globes or vases every second day in summer, and every week in winter; oftener if possible.

These little pets are now distributed through the Union more or less, but by a very little care they might ornament every lake and mill pond. To transport a pair of gold fish, procure an old Portugal grape jar, and tie a bladder over the mouth pierced for the admission of air; by this means they may be sent from one end of the Union to the other if the top is kept up; any simple contrivance will answer.

Many years ago the pond which contained a large family of gold fish, in Pratt's Garden, Philadelphia, gave way and the little pets were all emptied into the Fair-mount dam of the Schuylkill river, where thousands are now safely at home. They do not take a bait, and are consequently safe from the anglers. Why should not *all* pieces of water be thus populated. In the clear waters of some of our greater lakes they would be highly ornamental, as indeed they are wherever seen.

THE PAST SEASON.

Mr. Editor.—The past, has been a season of unusual scarcity of fruit in this section, and indeed seems to verify the assertion that raising fruit seems to be attended with a great deal of uncertainty.

Grapes were the only crop of Autumn fruit in this whole region, with the exception of a few Peaches, Pears, and Apples. One orchard alone containing a number of trees of the Kearosee, and White Apple of which I sent you a few last season (now called White Winesap). These trees had a pretty good crop (I have not known them to fail twice in fourteen years).

Can we not select such varieties as can be relied upon at all times? I have no trees to sell of these varieties, and therefore am not interested in bringing them out, but think there may be plenty of other good varieties that will bear in almost any season, if we could get hold of them.

Why is Horticulture not one of the branches taught in our Colleges, Academies, and Common Schools? Then men would begin at the right place when undertaking to raise fruit, and not spend a fortune and years of time in learning by sad experience, what they should have known before they commenced.

Depend upon it, a lecture once a month to the students of institutions of learning in the country, on the subject of practical Horticulture, would in a few years show a change in this important, useful and interesting branch of industry.

The time has come, when we may no longer plant a tree, and say live, grow, and bear fruit abundantly, as of old; there are other things to be taken into account.

The land is not new as it once was; all the insects of the forests (now cut away) have taken up their abode in our orchards. Bugs, beetles, borers, curculios, aphids, &c., in hosts.

Clear away the grass and weeds around the trunks in the fall to prevent mice from barking, scrape off all moss in the spring, wash the trunks with strong soapsuds, look out for borers, and cut out, if any are found.

Prune every year to avoid cutting large limbs; keep up bonfires on calm nights in June, and destroy millions of mischievous insects; when your trees overbear, knock one half the fruit down when half grown, and you do much towards securing a crop the following year. Let no sods grow in your orchards, raise no wheat, rye, oats, or barley, in your orchards; beans, potatoes, and corn, will be much better; and for every good crop of Apples or Peaches, give a good top dressing of ashes and manure. Smoke your Plum trees three times a week with burning leather and mouldy hay, from the time the blossom has left until the fruit is nearly grown.

Cut the worms out of the Peach trees, level the earth again, and put a small circle of rock salt around them, or an old piece of strap iron, the rustier the better; open at one side so as to yield with the growth of the tree, this will be a remedy for one year at least.

Some one, and perhaps many, will say, all this is too much trouble, but it will pay. It has come to be the fact that the price of fruit, (like liberty,) is eternal vigilance.

Should life be spared me, and next season be a fruit one, we will report on this same subject. Yours truly, THE SPY.

Lebanon County, Pennsylvania, Nov. 18th, 1858.

CALIFORNIA FRUITS.

A CORRESPONDENT of a daily paper gives the following interesting account of California fruits:

The annual fairs of the Mechanics' Institute and the Horticultural Society, united, are now open at San Francisco. What we have written of the fairs at Marysville may suffice as a general description of this, except that here is no exhibition of cattle, and no racecourse. It is not an agricultural fair. The display of fruits is much larger, because this is the great central depot for the State. In no Eastern State can an exhibition be got up of fruits of so vast variety, and of specimens of such perfection,

as to show not a blemish. In no country is there such difficulty in awarding premiums, because the general excellence is such that it is only shades of difference which determine the awards of merit. We shall not go through a list of varieties, because you can scarcely name one that is not represented; but we may give some peculiarities that will interest every horticulturist. We were in a position that gave us the means of exact information. The apples are from trees seldom exceeding five years old from the graft. Whether in fineness of texture, or in fine flavor, California apples fully equal those of Oregon, and we cannot find much if any difference in comparing the general run with the apples of Eastern States. There is one peculiarity of importance, viz: about two thirds of your winter apples become autumnal fruit here, occasioned by the uniformity of the temperature and other climatic causes. This is against the profitable account. By reason of this, in selecting the best winter apple for the premium, a score of undoubtedly fine so-called winter varieties had to be rejected as autumn apples, and the Northern Spy was decided to best combine, with other desirable qualities, that of keeping for spring use. The Early Pearmain took the prize as the best summer apple. But as the season is over for summer varieties, the best is probably not on exhibition. The Gravenstein is the fall apple pronounced the best. We hope to send you pastel drawings of these, colored to life. Size is not a material element before the judges, but longevity and general qualities. It is found that different varieties of apples are adapted to different soils and exposures. What does well in Napa, may not do at all at Petaluma, for instance; and this remark applies to other fruits. We attended the convention of fruit-growers, where, in the usual practical way of getting at things here, each variety of every species of fruit was culled, and growers were interrogated as to their experience. Everybody in California talks with ease and to the point, and everything that is known is thus elicited. You would be surprised at the intelligence and ready wit that sparkle at such conventions here, tempered with all courtesy and good humor. There is a keen relish for a little bit of fun, and persons who come here to speak, should cultivate that branch of eloquence.

Pears are in large display. This is especially the home of the pear, the plum and the grape. These fruits have no enemy in California. The old mission trees of half a century, and the vines of nearly equal age, hang now as full as at first, without a speck to denote deterioration. The Bartlett takes the premium, but there are plenty of nearly equal excellence. The flavor of the pear here is superior to that of the States. The plum here is less acid and more flavory. Of the peach opinions differ. We should say, as of the strawberry, it is scarcely so well flavored as in the East. But, in all other respects, these two fruits are very fine. The peach does not make profitable production in what is called the Bay country; that is, wherever exposed to the unceasing winds that sweep the country for some thirty miles east of San Francisco; and grapes may be included. These last are also injured by the summer fogs peculiar to the coast. The best section for peach and grape is undoubtedly around Sacramento; and thence, over a vast extent of country east towards the mountains, and south to Lower California. Los Angeles has long been celebrated for grapes, and it is, perhaps, the most profitable section for their culture. Nectarines are abundant; but this fine fruit comes with the peach, and the retail market has

not made an adequate opening for it. Apricots are early, and find quick sale. Prunes are on exhibition, dried in the air. These show how well adapted is this climate for drying fruits to export. They can be cured in the open air, and out of the too drying rays of the sun. There is no danger of injury from rains or dews while being cured, and for these reasons California dried fruits will take the first rank in the market of the world. The pomegranate, though exhibited, is a rare fruit. The climate is exactly suited to its growth, but, like the orange, the almond and olive, cultivators have not seen any prospect of a profitable market for it. The almond is the fruit-stone of a certain kind of peach whose fleshy part is not palatable. At this time the loaded trees exhibit a curious appearance, the almond peach being bursted, and showing the almond stone within the cleft, clean and ready for market the moment it falls out. The California white walnut is superior to the European in one respect; it leaves upon the palate no bitterness after eating it. The tree grows wild along the Sacramento. The Lawton blackberry has found its way here, but the exhibition proves that it is equalled by two varieties natives to this country. It is hard to beat. There are very few quinces at the fair; but these are fine and free from any blemishes. We see everywhere plants of trees, but scarcely any of this fine preserving fruit. It may be that this season has been unfavorable. From this display one must set down California as a country in which fruit must ever hereafter be plenty. It is now, and it has been, the most healthy country on the globe, when fruit was not to be had, and the accession of this wholesome element to the diet of the people, gives earnest that the general sanitary condition will be sustained and improved.

San Francisco, Sept. 18, 1858.

ON THE VALUE OF LIQUID MANURE.

BY F., *Gardener.*

NOTWITHSTANDING the repeated recommendations of practical men in favor of liquid manure, but little attention is paid to the subject. If it be of the vast importance which it is said to be, why is it so little used? Why does not every garden contain its tank, in connection with the manure heap? To make such an arrangement, to provide a receptacle to retain the juices of the decaying weeds in the rubbish heap, can neither be difficult nor expensive; and if it be practicable and easy of accomplishment to provide for the latter, the same arrangement would be suitable for the manure heap. A common tub or cask of any kind will answer the purpose, and if it is leaky of itself, it may be rendered water-tight by puddling round the outside. It is supposed, of course, to be placed with its upper end level with the ground, or as much under the surface as will ensure drainage running into it. I have applied it in various ways, and in every instance with results which have proved its value. On my flower beds I have used it freely during winter, and especially in frosty weather, when snow was on the ground. I have several tanks, but they are all connected with each other. In one of these I have fixed a large wooden pump, through which the liquid is drawn and carried to the flower beds and borders, as time permits.

THE NEW GLASS MOSAIC JARDINIERE.

We had occasion to refer to Mr. Ransome's improvements in artificial stone-work for vases, edgings, and statuary. We here call attention to a new style of decoration in connection with plant culture, namely, to Mr. Stevens' new Glass Mosaic Flower Pots, as most elegant ornaments for the reception of plants in the drawing-room. The glass mosaic is introduced in panels of pure white polished cement, and the "pots" are made after various beautiful forms, the mosaic being of many elegant patterns, which

we can only compare to the endless forms seen in the kaleidoscope. The pots are lined with sheet zinc, either to hold another pot, or soil for plants, or to contain water, as a vase for the reception of cut flowers. They are, in fact, the most beautiful things of the kind that we ever saw, and, when more generally known, will win universal admiration. On a stand, as a window ornament, there can be no more attractive object. Mr. Stevens is deserving of great commendation for such a happy idea as the application of glass mosaic-work, remarkable for its rich and costly appearance, to the embellishment of flower pots. We would recommend our lady amateurs to inspect the stock at the manufacturer's premises, No. 56 Great Queen Street, Lincoln's Inn, being assured they will not fail to be delighted with so elegant an article for the reception of their drawing-room pets.—*London Florist.*

A FEW REMARKS ON GOOD CULTURE.

BY WILLIAM CHORLTON.

NOTWITHSTANDING the oft reiterated assertion amongst our modern progressive cultivators that our present experience is far a-head of our forefathers, I am led to think, sometimes, when ruminating over the records of excellent quality, abundance, productiveness, and certain results of much of the direct, simple, and observant practice of former days, that we take more upon ourselves than we are justified in doing. True, the development of science has done a great deal for us, and we have accepted to a great extent the benefit of it. As a general thing we can explain more eloquently the why and wherefore of vegetable existence and intricate organism. We can analyse and show the chemical components of soil, and draw inferences therefrom which look very plausible, and in some measure assist our investigations, although they may often be found unreliable. In the aggregate, also, we, perhaps, know more, and succeed with a greater certainty; but do we not often claim too much, and, really, in the same meaning, rest our boasted superiority upon pretension, or the hasty gallop of enthusiastic zeal? Are not the truly improving, the observing, reasoning, practically demonstrative, and more positive followers in the race, tripped up and left behind in public estimation? However this may be, we have not yet arrived at a knowledge of the best general cultivation sufficiently to make it "familiar as household words." No; rather, such are but exceptions to the rule; science, hitherto, has, in too many cases, only produced, mentally, a metaphysical effect, and has led off some of its votaries into extremes, both chemically and physiologically; the consequence of which, is much pedantic palaver without originality, and a great flourish of unproved advice. In speaking thus I would not in the least insinuate against the sterling merit of those of our co-workers who have the common sense, and ability to advise, and practice in the right track.

If we take cultivation as it most commonly exists in the broadest sense, we have to accept the tearing up, pulverizing, and draining of land, the admixture of certain manures when it is found to be deficient of such, the sowing or planting of different crops, keeping down and destruction of weeds, loosening and stirring the soil during growth, and harvesting the various individualities according to their kind. There may be also added, as a speciality, the pruning and training of branches in fruit trees, transplanting while in the nursery rows to obtain an abundance of fibrous roots, care of the roots during removal, and several other small details. All these practical operations were known and successfully acted upon before the Chemist, or the mere Theorist ever thought of introducing science to assist in the cultivation of the earth; and the advocacy of these helpmates has not been conducive of so much benefit as is sometimes asserted, from the fact of their being, too often, thrust upon the simply practical observant mind in a dogmatic, and to him, proofless manner. If *some* of our Agricultural editors would weigh this subject well, it is more than probable, they would keep out of their periodicals some of the nonsense which is often printed, and find room for more reliable advice. Better, far better, if short of matter, to copy judiciously selected extracts, that may be depended upon, from the standard works of competent authors. But to the point.

If we would succeed to the best of our wishes, it is necessary, not only, to possess the practical routine, but include as much scientific truth as may be needful for our purpose. A small portion of the latter is sufficient to give us to understand, that the roots, leaves, branches, and trunks of a tree must, comparatively, correspond with each other in the absorption, ready conveyance, assimilation, and decomposition of the different elements, which unite into the varying and modifying compounds, and also, that there must be present, in the soil and atmosphere, all that is requisite as food, and for respiration, and further, that under contingently occurring circumstances, it becomes necessary to perform peculiar operations, supply more abundantly, or withhold, certain proportions of the general requirements. With regard to the latter of these points, practical experience teaches us, that a good friable and rich soil, in other words, a due combination of clay and sand, largely incorporated with vegetable matter and neutralized ammoniacal salts, is one of the most permanently fertile; and that we can greatly increase the growth of most plants, if healthy, by adding an abundance of the last two in a liquid, or even solid state, during the period of activity; while injury would be done to the same while at rest. On the other hand, science shows us when we have a subject that is over vigorous, and consequently unfruitful, the application of further stimulant would only increase the evil, that it may be possible the roots are drawing too much crude fluids from a want of proper aeration of the soil and deficient drainage; in consequence of which, the right proportions of nutriment for forming concentrated solidity, in connection with free exposure to the light, are not obtained; the result being, only an exuberance of uncentralized development devoid of the fruit producing properties. Science further informs us, that it is not the extent to which the roots may elongate, or penetrate, nor yet the extreme length or volume of the recently formed branches, that healthy longevity, or present and future fruitfulness is gained, but the so increasing the number of mouths or spongioles of the one, with plenty of proper food in the vicinity as to produce robustness without much extension of the other, and in addition maintaining a proper atmosphere for the leaves to perform their functions. Consequently it is advisable, every two or three years, to dig a trench, some two feet deep, around each tree, distant according to size, and immediately fill in again, adding, at the same time, a portion of well rotted barn yard manure, or vegetable mould, in which is decomposed a portion of guano. This procedure will cut off the extreme ends of the roots disposed to ramble, and force them to throw out a great increase of others, which will make up for the deficiency and enable them to feed near at home, without the necessity of having to travel to a distance for, perhaps, a less amount of the right nourishment that will form fruit producing compounds. We have a proof of this reasoning in the Pear on Quince roots. The quince, unlike the pear, does not extend its roots to a great distance, naturally, but is provided with an immense number of them, so much so, that a tree may often be drawn out of the ground like a matt, plainly showing in this instance, that whatever fertilizer is used it ought to be applied in their immediate vicinity, and leading us to infer, that the earth in which it is located should be rich and deep, which will enable the growth to progress to maturity, and prevent sudden checks by drought or otherwise. That such is the case has become a demonstrated fact, and if the same principle were to be more generally carried out, there would be little cause to com-

plain of the want of success, providing the ground be not overstocked with other vegetable growth.

Now this example may be taken as a stand point in the culture of all fruit trees, or indeed plants of any kind, and I would again repeat, for the subject bears arguing, we can obtain better quality, more certain productiveness, and permanency, by increasing the number of small rootlets, and supplying enough food "near at home," than by forcing the natural adaptability of the plant to travel over a great space in search of the proper elements wherewith to sustain its own existence. It luckily happens that we have a few thorough-going men, who eschewing almost universal prejudice, have stepped out of the common course, and observed for themselves; men who have joined together the aforesaid practical experience and scientific theory, and have proved, against all opposition, that the above is the only correct principle of cultivation, and will realize the most profit. As proof of this, we have only to read over the works of such authors as Mr. Rivers of Sawbridgeworth, England, and other prominently known good men who practice what they preach, when we shall find sufficient to warrant a trial of what they have accomplished as fact. There is no doubt but many hangers back will consider such recommendation as requiring unremitted attention, and as expensive; admitted; all things Agricultural and Horticultural do so if we desire to obtain after profit and gratification. It is man's curse, "Thou shalt eat thy bread by the sweat of thy brow," and we must no more think of escaping the injunction than Adam of old. Providing such is the case, what then? Is it not far better to be realizing, permanently, a large percentage upon invested capital, and eating the produce of our labors in greater excellence, than grunting about empty pockets, and indigestible inferiority? Good culture is always the cheapest in the finale, although it may require more outlay at the beginning, and if we can still further improve by uniting the desiderata, Practice and Theory, it becomes absolutely ridiculous to work in any other way. Depend upon it, if we are anything ahead of our forefathers it is in this particular, for I doubt very much if we are not somewhat behind them in the simply practical, at least, when we look at the many old and neglected orchards, with moss-covered trunks and branches, which were once vigorous and clean, and yielded luscious fruit, standing despondingly amid hard grass turf, the under base of which has long since had drawn out of it all the elements of nourishment, inviting us to assist them by culture and the help of manure, by which they would again repay bountifully. And again, then see some ignoramus making holes in a similar situation about large enough to bury a cat in, thrusting therein vigorous young trees, the ends of the roots turned up at the sides for want of its being larger, and those sides hard as a baked brick, we are reminded of the truth of such a supposition. Be assured, if we are to succeed, keep our fruits from wearing out, and with their sweets in perfection, we must drain well, trench deep, plant carefully, and, if the soil is not already well supplied with the needful, add it; and, afterwards, continue this needful care, both solid, and liquid as may be necessary, and without the interference of the grass or any other crop. Let us have our fruit trees cared for as well as the gardener does a cauliflower when he wants it for exhibition, and secure concentration of the fluids in the roots and branches properly; let them be, with this, equally proportioned, and we shall not have to mourn over so many unsuccessful, recent examples,

nor hear so many statements about such and such fruits being worn out, or proving a failure.

FLORICULTURE AS A SCIENCE.

BY G. GLENNY, AUTHOR OF "THE PROPERTIES OF FLOWERS."

This embraces, first, the cultivation of flowers in the highest degree of perfection; secondly, the improvement of the races. The former is practised successfully by thousands, the latter is becoming more general. But, until the nineteenth century, there was not much progress made, although many attempted it. The advancement thus made was confined to very few subjects, and was accomplished chiefly by the humble classes. For many years before the late start, in 1832, there was no well defined object to attain in any single flower. Writers on the subject pretended to tell us the criterion, as it was called, of a good "this," "that," or the other, but not one of them advanced a hair's breadth beyond an imitation of what we already possessed. They knew what particular variety was considered a good one, and they made that the "criterion." Of course, as there was nothing to try for, nothing to aim at, but to produce new ones as good, nothing beyond it was achieved. But, in 1832, we ventured to publish a series of imaginary qualities, which we knew would be appreciated by the public, if they could be accomplished; and we also knew that the nearer the approach to our model that a flower could be produced, the better would it be pronounced by all who had the least taste. When we insisted that the Cineraria, the Pansy, the Verbena, the Geranium, the Phlox, and others, should be positively circular in the outline, and free from indentations, we had to bear the sneers of people who could see a yard a-head; and scores, who called themselves florists, pronounced all these changes to be impossible, and therefore, our notions ridiculous. But no sooner did the raisers of novelties know what to try for, than they selected a very different style of flower to seed from. Those which had widened their petals, and thereby lessened the gaps where they divided, however ugly and unpromising the color, were preferred, to seed from for future novelties, and we need not point out that nearly all the "impossibilities" have been accomplished; that is to say, the open star of the Cineraria has disappeared, and they are produced circular; the Phlox is perfect, though at one time it was the form of a five-sailed windmill; the narrow petals of the Verbena have widened, and it is rapidly progressing; the Geranium has wonderfully advanced towards perfection; and every flower for which we set a model has been vastly improved. Of course there was no more sneering at our "impossibilities. The Fuchsia, which, in all our recollections, was a graceful drooping flower, with the sepals hanging close and almost hiding the beautiful corolla, was not to our taste. The inside of the sepals is always brighter than the outside, and we laid down the law, that the sepals should reflex, like a Martigan Lily, showing the whole of the velvet corolla and the inside surface, instead of the outside of what was once its covering. Of course this was, in some people's eyes, another impossibility,—"it was unnatural," it was "turning the flower wrong side out, and the sepals upside down." The public, however, had faith in what we said a flower should be. There were

raisers who seeded from varieties that showed the most inclination to reflex, and look at the flower now! The improvement has been so palpable, that the veriest tyro would instantly give the preference to the reflexed petal. The Dahlia was a weed. One nurseryman cultivated and collected all the monstrous flowers that were oddly formed. There were "Anemone-flowered," "Ranunculus-flowered," "China Aster-flowered," "Globe-flowered," and as public curiosity and public taste struggled for the mastery, we thought it high time to banish such rubbish, at least from the show tables. We set forth the qualities a Dahlia ought to possess. We succeeded in directing public taste to a proper channel, and totally destroying the sale of all the bastard nondescripts. The Tulip was little valued for its form and purity, and the most foul and illshaped varieties disgraced many of even the best beds, and constantly took prizes. All the criterion that was held up for a good Tulip failed in giving the smallest idea of the form it ought to assume. One told us it should be the form of a cup, but which of the hundred-shaped cups that were made for ornament or use the raiser was to take for his model, nobody thought of telling him. Another said the stem was to be a particular height, when the youngest grower knew that there ought to be three, if not four different lengths. When, therefore, we settled the question, by saying the form should be half a hollow ball, and, when fully opened, a third of a hollow ball, the only snarling we heard was one scientific noodle in the country showing, by some twattling argument about the physiology of the flower, that our proposed form was neither possible nor proper; whereas, we pay no more respect to the physiology of the Tulip than we did to the star of the Cineraria, or the heart-shaped top and butterfly wings of the Pansy, when we were told that the proper form was indicated by the name, *Heartsease*. *Now*, the very best growers of the Tulip value its near approach in form to from half to a third of a hollow ball as one of its noblest features, although we have not many that come near it. In short, there is no denying that the publication of our *Properties of Flowers* improved the taste, and settled some very unprofitable squabbling amongst florists, and that the work is looked up to as an authority. The summary amounts to this: That our *Properties of Flowers and Plants* were opposed until they became authority, and then copied and republished as if the thieves had been the authors. The science of floriculture has, however, progressed, ever since the *Properties* were made public.

There is no good reason why a man with only a rod of ground should not industriously take up one subject, and raise some every year, throwing away all that are not new, or better than the old of the like character, and saving seed from such as exhibit some good points. There is great room for a change in the Pink, Pansy, Verbena, Patunia, Dahlia, Polyanthus, Auricula, Carnation, Picotee, in short, in almost every flower, and the proper way to commence, is to get a pinch of the best seed he can command, that he may have a chance, though perhaps a poor one, the first season; but to buy one plant each of the few most striking varieties of what he is going to raise, and save for himself the next, he will have this great advantage the second year, he will start fair with the very best growers, because he will have their best to begin with, whereas they have been persevering for years to get where they are. But nobody can expect that the best growers will part with their best seeds, to start others. They must seek among brother gardeners and amateurs; and in saving seed themselves, they must not be

content with marking the best, for if they let the worst open their flowers, the best will be spoiled. The best way is to destroy the others as fast as they come out, or remove the best, and plant them under glass, right away from the mass. The whole art and science of floriculture consists in saving seeds from those which are nearest what you want; and if there be any desire to cross one flower with another, remove the anthers from both, and apply the pollen of each to the other; but if a few of the best are placed together, away from all others, there will be little doubt of their crossing in every way, by the mere action of the insects. If all the amateur raisers would unite, there would be plenty of customers among themselves to pay a raiser well for a good thing; for, we are sorry to say, unless a flower that deserves it, is brought prominently before the public by an authority to be relied on, the raiser of a good flower has but little encouragement among the dealers.

We hope to hear of many novelties, even next year; for Petunias, Verbenas, Antirrhinums, Pansies, Hollyhocks, and some other perennials, if raised under glass and planted out in May, properly hardened, will not fail to bloom, and we all know that Dahlias perfect themselves the first season. — *Midland Florist.*

A GROUP OF VAN MONS PEARS.*

THEODORE VAN MONS, BEURRE KENNES AND CONSELLIER RANWEZ.

Theodore Van Mons.—Named by Van Mons I believe towards 1825 after one of his sons.

Free, handsome, pyramidal, good grower and bearer; admirably suited to the quince stock, where its fruit is more luscious than upon the standard. Fruit medium, ovate, sometimes pyriform truncated, with a long stem and a green smooth skin, turning yellow towards maturity. Flesh buttery, juicy, well flavored and sweet enough; but a little uncertain. In good seasons, very best; in wet or unfavorable seasons a second rate pear. Ripens well and slowly throughout September, often to the middle of October, must be picked before the color of the skin indicates its approaching maturity.

Beurré Kennes.—Fruit medium, pyriform, of a dark hue, brown reddish with numerous dots, and a rather rough skin; a very conspicuous fruit in the garden. Quality good to very good; flesh half buttery, with a fine aroma, a little gritty at the core; but keeping well for its season, (end of September to middle of October); stem medium, sometimes fleshy and inclined obliquely. Calyx irregular with few or no segments. It was obtained by Alexander Bivort from the seedlings of Van Mons, and fruited in his grounds for the first time in 1845. The tree is a good grower and of a pyramidal shape. Succeeds upon the quince, but better upon the pear stock.

Consellier Ranwez.—Obtained and dedicated to his friend Consellier Ranwez, by Van Mons, towards 1830.

* See Frontispiece.

The tree is one of our most vigorous growers, a first-rate bearer, and seems to succeed in all soils fitted for pear trees.

As a market fruit, large and of good quality, we think we can safely recommend it; the tree yields abundant and almost sure crops, being hardy and sound. Fruit obovate pyriform, large; with a long stem, and a green skin, which changes little towards maturity. Flesh juicy, melting a little, coarse but pleasant.

It is better suited to the pear than to the quince stock. Ripe in Boston and New York state from the end of September to the beginning of October.

L. E. BERCKMANS.

LARGE TREES.

BY S. B. BUCKLEY.

IT is curious that the large trees of the United States east of the Mississippi river, and especially the size to which the different species attain have received little attention since the time of Michaux. I have been collecting information on the size of trees and measured many during the last few months, and intend to publish through the *Horticulturist* a few notes on the subject, in hopes that others will also measure them and note their relative size. It would be useful also to know the ordinary age of each species of tree. They are the oldest living things on our globe, serving as links binding us to the past and connecting us with the future. I love to gaze on a very large tree; it excites reverential feelings. It has lived before Columbus discovered the New World, it has afforded shelter to the Indian, a refuge to the weaker animals, and a resting place for birds ages ago. Aye, it may have lived when the mastodon roamed through the old forests. Through many summers and winters it has survived the companions of its youthful days, and now its huge trunk and great diameter preserve it from the attacks of the woodman. Long may it live and flourish. An enlightened spirit of agriculture is now dawning upon our country, and the public attention is directed to the importance of protecting trees and engaging in their cultivation.

Liroidendron tulipifera; this is called the tulip tree in New England, white wood in western New York and in northern Ohio, and poplar in some of the western and all of the southern States. It is extensively diffused, and taking in all its dimensions is probably the largest tree east of the Mississippi river. It is much used for building and cabinet purposes, probably more so than any other tree excepting the White Pine. In New England and New York, it is rarely more than four feet in diameter, but in the western States it is often five and six feet in diameter. Michaux measured one near Louisville, Kentucky, which was nearly eight feet in diameter, and he

relates that he saw much larger ones in other parts of the State. During the past summer I measured several in Indiana and Kentucky, which were between six and seven feet in diameter. In the rich coves at the base of, and among the southern mountains, these trees grow to their greatest size. There is one near Cold Spring, on the banks of the Pigeon river, among the Smoky mountains, in Haywood County, North Carolina, which is 33 feet in circumference, at 4 feet from the ground, and I measured another recently in Siveur County, Tennessee, near the base of the Smoky mountains on the Little Pigeon river, which is 29 feet 3 inches in circumference, at 4 feet from the ground, and my friend T. J. Lenvir, Haywood County, North Carolina, measured another near Waynesville, North Carolina, which is 27 feet in circumference. Besides these I have measured many among the mountains of North Carolina, ranging from 6 feet to 8 feet in diameter during the present autumn.

These trees generally have a trunk nearly cylindrical, and of nearly uniform size, to the height of 60 or 70 feet, the whole tree being from 120 to 140 feet high. When cultivated they send forth numerous expanding branches affording an ample shade. Their neat, glossy, singular leaves, and beautiful tulip shaped flowers, render them very ornamental and worthy of general cultivation. They belong to the natural order Magnoliacea, their fruit resembling the Magnolia or Cucumber tree.

ON MULCHING.

BY WILLIAM SAUNDERS, GERMANTOWN, PENNSYLVANIA.

If we were asked to say what practice, founded on *principle*, had been most beneficially introduced into our horticulture—we should answer *mulching*—mulching suggested by the need of moisture in our dry climate, and the difficulty of preserving it about the roots of plants.—*A. J. Downing.*

At the late meeting of the American Pomological Convention the subject of mulching was brought up, and an opinion unfavorable to the practice prevailed among those who participated in the discussion. As there was no vote taken on the question, it would be unfair to conclude that the sense of the meeting was opposed to the practice, as might be inferred from the published reports of their proceedings.

It is perhaps to be regretted that the Convention should undertake the discussion of such subjects, its time being too limited to do them justice; otherwise we can hardly conceive it possible that a practice so generally conceded as being in the highest degree beneficial, should be branded as injurious, at least without some explanatory qualifications.

The object of mulching is to maintain a uniform degree of moisture in the soil by arresting surface evaporation. This is most effectually secured by the interposition of a stratum of *air in repose.* Bodies are said to be good or bad conductors just as they are solid or porous.

Iron is a better conductor than wood; granite stone a better conductor than brick. Hard pressed soil is a better conductor than soil that is loose and porous. A beaten path is warmer in summer and colder in winter than the cultivated ground alongside of it; its particles being in close contact,

its conducting powers are increased; the arid winds of summer passing over its surface carries off the moisture which the heat evaporates, and renders it unable to support healthy and vigorous vegetation; therefore in covering with manure, tan, or charcoal dust we apply a material that contains more air than the soil, and in a position not easily disturbed.

As to the value of mulching as an auxiliary to successful culture, the result of practical experiments fully confirms all that theory propounds; and in the case of newly planted trees the preservation of a uniform degree of moisture in the soil surrounding their roots is the most important point of management, and, other things being equal, trees will languish or grow just in proportion as this condition is secured.

One of the speakers at the Convention alluded to, observed that, "mulching had always proved of no value, but rather injurious. I have found that the mulch dries out in summer when most needed, so as to be of little value, and the trees cast their leaves." This might well be taken as an argument in favor of mulching, as the trees lose their leaves when the mulching fails. The evident course, to pursue in such cases, would be to renew the mulch and so maintain vigor and preserve the foliage. The drying out of the mulch is no argument against its value. Such materials as tan bark, wood chips, charcoal dust, or even barn yard manure does not readily dry out, or decay. It cannot be considered a fair test to allow the mulch to dry out "when most needed."

Another objection to mulching is the harbor it provides for mice and insects. When mulching has been left on during winter I have seen much destruction from mice eating the bark and roots, but I have never seen mice do injury to trees in clean, cultivated ground, whether mulched or not; and in regard to insects I would express a contrary opinion, and assert that were it convenient to keep the soil constantly covered with a suitable mulch, we would abridge, to a considerable extent, the increase of insects; the shade and moisture of the mulching being inimical to their habits.

A further objection was brought forward, "that a heavy mulch absorbs all the water from a light shower, and the soil below is dry." This, as an objection, is practically unimportant.

Although mulching is apparently a simple operation, yet care is required in its application. Before mulching a newly planted tree, if in the spring, shape the soil in the form of a basin, extending the rim beyond the extremities of the roots, thus rains will be retained and artificial waterings effectually applied, if found necessary. If planted in the fall, the soil should be mounded slightly to the stem and well firmed round the roots; in either case be careful that the mulch does not approach nearer than within 10 or 12 inches of the stem of the tree. Winter mulching should be heavy to prevent frosts from reaching the roots, and will be found of great benefit in clean ground, but if rough and weedy so as to encourage mice, no mulching should be applied during winter, and every precaution taken to prevent them from eating the bark, such as trampling around the roots after heavy snows, and keeping the soil well pulverized, clean and compressed.

To be effectual it is not necessary that the mulching in summer be heavy, three or four inches in thickness of well rotted manure I consider the best that can be applied; if tan or charcoal dust, a thickness of two inches is sufficient; the short grass cuttings of the lawn forms a very suitable material, but it must be spread thinly so as not to ferment, which it is very

sure to do if applied wet in quantities ; a mouldiness frequently originates after fermentation ceases which is very injurious. Some years ago my attention was directed to a plantation of young trees that had suddenly and prematurely lost their foliage. They had been carelessly mulched with rough hay, and it was discovered that a peculiar fungus had originated in it and spread over the roots, and in some cases enveloped the stem of the tree. The mulching was immediately removed and the soil forked over ; the growth of the fungus was arrested, but several of the trees died. I mention this as a warning to inexperienced *mulchers.*

The benefits of mulching may be carried into the vegetable as well as the fruit garden. Mulching between the rows of growing crops I have found to be of great value. The soil is not compressed by rains nor baked into a crust by sun, weeds are kept down, evaporation arrested, and the crops materially increased.

THE BASKET WORM.

BY JACOB STAUFFER, LANCASTER, PENNSYLVANIA.

I SEND a neat print of the Basket-Worm, alias Drop-Worm, and Sack-bearer, from the german "Sacktrager," which Hübner named *Canephora* or Basket-Carrier. And the Rev. L. Guilding named it *Oiketicus*, which Dr. Harris says should be written ŒCETICUS as it implies "a solitary inmate of ones own house."

Like all rogues, by whatever name known, it is none the less mischievous, and demands a watchful eye, to which I can testify, having during the summers '55 and '56 destroyed a vigorous Arbor vitæ, which ornamented the front yard of my late residence in Mount Joy.

THE BASKET WORM.

The genera Oiketicus and Psyche are remarkable for the habit which their larvæ have of constructing for themselves portable cases of bits of grass, sticks or leaves, in which they reside, and undergo their transformations.

In this respect these insects represent the Phryganeidæ; indeed Mr. Newman does not hesitate to assert, that they ought to be removed from the present order. The females being wingless, never leave their cases, and according to the observations made by Ochsenheimer and Ingpen, it would seem that these females produce fertile eggs without fecundation.

My highly esteemed friend, S. S. Rathvon, Esq., of Lancaster city, who is one of our most thorough entomologists, has observed this insect since 1850, and wrote out several interesting accounts which were published in the April and September numbers of the Farm Journal for 1854, and named

it the *Oiketicus Pennsylvanicus;* whether distinct from the species named by Harris, *Oiketicus coniferum*, I will not attempt to decide. Yet I confess, that I could discover no difference between the *larvæ* inclosed within cases formed of the leaves of Pines, arbor vitæ, apple, quince, &c., of which I have various illustrations in my collections.

Mr. Rathvon states, truly, that "when the young 'Drop-Worm' is first excluded from the egg (May 24 and 26) it is about one sixteenth of an inch long; the head and three anterior segments, and also the pectoral or proper legs, are of a dark, glossy chestnut brown or nearly black color, the remaining portion of the body is a little lighter or rather a tawney. They descend by a fine silken cable, in rapid but regular successive order, from the lower end of the suspended folicle of the previous season, and light upon the branches and foliage immediately beneath, unless they should be blown to one side or the other by the wind; and are very active, using only the front or pectoral legs in locomoting and carrying the abdominal portion of the body erect. Immediately, or in a very brief period, after exclusion, they commence forming a cylindrical covering for the body out of silken tissue, coating it externally with small particles of whatever substance they may come in contact. These coverings in a day or two assume a truncated cone shape, are carried erect, having both ends open (through the the upper one of which the excrement is ejected) and may be found distributed along the smaller branches, or upon the upper surface of the leaves of trees; at which time they appear like minute deadened leaf-buds, naturally belonging to the tree, but on a closer examination it will be found they have gnawed away a small portion of their epidermis, which has been added as an outer covering to their habitations, perfectly disguising them, but at the same time leaving a trail of the inner bark exposed to view."

The above is verbatim from Mr. Rathvon's description, I shall take extracts only of a few prominent points from the remainder of his able article in my own language.

During the month of June and July they are very destructive to foliage, when their habitations assume a pendant position. From the first till the end of August the larvæ are engaged in securing their sack-like habitations, preparatory to undergoing their transformations. The female with instinctive foresight is careful to fasten her habitation to a healthy living branchlet, securing the upper end, and carefully guarding against the wind and weather of the approaching winter season, undergoing the change from the larva to the chrysalis state in about thirty-six hours. Never leaving her domicil until ready to perish, after having well stored the same with the eggs for her future brood, even sometimes she dies in her feeble attempt to escape, clogging up with her attenuated body, the opening through which her progeny escapes.

The male pupa is readily distinguished from the female, being rather smaller, and exhibits the wings, legs, &c., distinctly. And is less considerate in the care he takes of his residence, attaching it to any convenient object, having no use for it after once developed into a small mole-colored moth, which takes place about the end of September.

When on the wing he seeks the secluded female, so modestly retired, introduces himself to her, posteriorly, elongating his retractile abdomen, and as friend Rathvon says "he has only to pat her amatively and cozily on the back, and say, in effect," be "fruitful and multiply" and it suffices.

To one not acquainted with these insects, the male and female in their perfect state would seem as belonging to different orders of creatures. The name drop-worm is very appropriate, as they drop in quick succession from the suspended folicles and when changing from branch to branch, in their work of destruction, both for food and building material, making sad havoc of the foliage.

The most certain mode for destroying them, is to pick them or the folicles off by hand, and committing them to the flames. Mr. Rathvon says he has observed two species of Flymenoptera that destroy the larva of Oiketicus. I witnessed a very interesting fact; a large species of the Ichneumons, lit on one of the tough bristly folicles, and commenced pinching it with its long jaws, irritating the ensconced larva, till it menacingly thrust out the upper portion of its body, when the wily fly gave the larva a dab with its ovipositor, and no doubt lodged an egg, before the silly creature could again withdraw into its domicil.

GRAPES.

Mr. Editor.—My attention has been called to an article of Mr. Allen's in reply to Mr. Eaton of Buffalo, as to the difference between the so-called Royal Muscadine, and Chasselas Fontainbleau grape. I have had the experience of some twenty-years among vines, and if your humble servant had the capacity to see and know the difference between a cabbage and a cauliflower during that period, perhaps it will be generally conceded he knows the difference between two varieties of grapes. Now to the subject.

The Royal Muscadine of England, and the Chasselas Fontainbleau of France, are identical and the same grape. But here let me be understood. There is in this country as well as in England a confliction of nomenclature. We have there as here a White Muscadine, or White Chasselas—the latter and the former are confounded. The White Muscadine bunches are of medium size, shouldered, rather loose and long; berries globular, light green, flesh rather firm, flower never large, yet passable.

Royal Muscadine or Chasselas Fontainbleau, bunches large and shouldered. Berries round, middle-sized, growing crowded, amber color; when ripe flavor excellent; wood stronger and darker than the above. This variety we grow, and the bunches are commonly one and a half pounds. Again, Mr. Allen is of the opinion that the White Nice and Royal Muscadine are the same. Now to me this difference is monstrous. I cannot conceive any greater difference existing between any two vines (except that of white and black) than exist between the Nice and Royal Muscadine, or Chasselas Fontainbleau. However, I will endeavor to describe the Nice as I have known it in the Horticultural Society's Garden in London, seen it elsewhere, know it and grow it myself. First, the vine is a very strong grower, almost as strong as the Syrian, foliage very large. I have just measured some of the leaves and find they are sixteen inches long by twelve wide, very downy underneath the leaf; young wood rather light, with a red stripe, bunches very large, often twenty-four inches long and twenty inches wide. My experience is that, with good culture the size of the bunch improves with the age of this vine. Berries medium size, appear soon after setting

to be rather thinly set on the ramifications of the bunch. Footstalk of the berry very long. Color yellowish green, when ripe.

In reference to the footstalk of this grape, I do not know any other that resembles it. It seems to carry each berry erect, not hanging one on the other for support like the Syrian, Palestine, or Barbarossa. Again, the size of the foliage, also the color, is vastly different from the Royal Muscadine; the leaves of the latter measuring ten inches over, and of a light green, the former sixteen inches and dark green. The Royal Muscadine weighing one pound and a half. The White Nice weighing five and often six pounds. My conclusion is, that Mr. Allen does not grow this White Nice, from his own description of it, but has the Royal Muscadine for it. Again, the old White Muscadine is plentiful enough all over the country for Chasselas Fontainbleau; and this explains the mystery with Mr. Allen in his not being able to discover much difference between the two. No person that ever grew White Nice, true to name, could confound it with any of the Chasselas. Now we are speaking of grapes I may mention the Barbarossa, or Prince Albert an identical. And with me it deserves a better character than is generally given it in reference to its fruitfulness. I have cut this season 35 pounds from an eye struck and planted in the spring of 1856, many of the bunches weighing 5 pounds and one 6 pounds. Please remember this is not guess work, for we weigh all the fruit twice over, on the premises and in New York City where it is sold. This was produced too, without any dead horses in the borders. Yours very respectfully, FOX MEADOW.

NEW PLANTS.

VIOLA PEDUNCULATA, *Torrey and Gray.*—The handsomest we know of the genus, albeit lacking the fragrance of the great favorite, the Sweet Violet of Europe. It was one of the many discoveries of Douglas in California, during the last of his journeys, and but a little before the accident which caused his death in the Sandwich Islands. It has been since found by Mr. William Lobb. Beautifully dried specimens were sent home by him, and plants were reared from seed by Messrs. Veitch & Son, Exeter and Chelsea Nurseries, the exhibition of which at the Horticultural Society naturally attracted much attention. It seems well suited to cultivation in a cool frame. It flowers copiously in May. Mr. Nuttall detected it as far south as Monterey. *Botanical Magazine, t.* 5004.

The flowers are a bright golden yellow with a pair of large blood red blotches at the back.

AZALEA OCCIDENTALIS, *Torrey and Gray, Bot. Mag., t.* 5005.—The plant just published under this name in the Botanical Magazine is known in gardens as Azalea Californica. It has pale yellowish flowers, and is probably as Sir William Hooker suggests a mere form of A. calendulacea, of little horticultural importance.

ARALIA LEPTOPHYLLA. Nat. ord., *Araliaceæ.*—Lately introduced from New Caledonia, by Mr. Milne. Stem upright, round, and smooth, producing branches with difficulty. Leaves about two feet long, lanceolate, narrow, dark green, with reticulated silvery white veins, the mid-rib being particu-

larly conspicuous from its prominence and bright color; margin entire and slightly waved, gracefully drooping towards the extremities. As the plant has not yet flowered in this country I cannot describe the inflorescence, but it is, in all probability, worthless in a horticultural point of view. Its best quality is, doubtless, in the beauty of the foliage, and in this it is not surpassed by any other plant of the kind, for it combines beauty of form with pleasing colors; and the stem, from base to summit, being thickly and regularly clothed with these beautiful leaves, it presents altogether a charming appearance. One part peat and two parts good strong loam is the compost it succeeds in best, and plenty of moisture at the roots, but not stagnant with the moist warm atmosphere of the stove, is an essential requirement in the culture of this plant.—*London Florist.*

GOETHEA STRICTIFLORA. Nat. ord., *Malvaceæ.*—Native of Brazil. Stem upright, round, numerously branched. Leaves broadly ovate, acute, light green; veins prominent; margin slightly and irregularly notched; petiole short, with two linear lanceolate stipules at the base. Flowers small, with four cordate bracts, longer than either calyx or corolla, and quite inclosing both; red. Calyx divided into five short ovate segments; red. Corolla deeply divided into five cuneate segments; red, and somewhat membranous.

It is in the profusion of the flowers that the beauty of this plant rests. The old wood of the stem and branches is literally covered with the pretty little flowers at all seasons, the plant being irregular in its blooming season. It requires the treatment common to stove plants, and peat and loam, the latter predominating, are the compost in which it delights.—S. G. W., *Kew.*

PHILODENDRON ERUBESCENS. Nat. ord., *Aroideæ.*—Plants of the Arum tribe are not by any means so generally cultivated as they deserve to be when we consider their singular and varied forms, fine foliage, peculiar and often richly colored inflorescence, together with, in some cases, a delightful scent. In tropical countries these plants constitute a striking feature, while they are as well among the most singular inhabitants of our stoves. For out-of-door culture also, there are some very pretty plants belonging to this natural order. What is more curious, and indeed we may say, so prettily striped, as the white and deep purple, almost approaching to black in the spathes of *Arum triphyllum, var. zebrina,* a perfectly hardy border plant, and yet how seldom is it seen in cultivation! The present plant, *Philodendron erubescens,* is one of the most conspicuously handsome of the tribe. The spathe is boat-shaped, six or seven inches long, of a deep blood-colored purple on the outside, and bright crimson within; the spadix arises like a small column of ivory, and the foliage is of fine size and rich glossy green. It is closely allied to *Arum grandiflorum* (*Philodendron Hookeri,* of Schott), but differs totally in the color of its spathe, which in the latter plant is white or cream colored. The native country is unknown, though there is much probability of its being found in the Caraccas. It requires stove treatment. (*Bot. Mag.,* 5071.)

EDITORS TABLE.

To Contributors and Exchanges, &c., &c.

Communications, Letters, Catalogues, Periodicals, &c., &c., intended for the perusal of the Editor, should be uniformly directed to the HORTICULTURIST, *Germantown*, (*Philadelphia*,) *Pa.* Packages by Express, &c., should be directed to the Editor, as above, by name; they will thus reach him almost beyond a doubt.

THE GRAPES.—We present our readers in the present number with much matter regarding grapes, a topic of increasing importance. Mr. Charles Downing's article will be read with interest, and in connection with it we refer to the reliable catalogue of Dr. C. W. Grant, of Iona near Peekskill, New York, who has a very valuable stock of grape vines, for the supply of dealers and growers. Dr. Grant now brings out the *Anna*, which we have twice tasted, and we think well of it, though for excellence, independent of growth, our own choice is as follows: Rebecca, Delaware, Diana, Clara. Anna may prove superior, as it gets more growth and age. Of the Diana Dr. Grant says:

"The 'stock' (constitution) of the vine has been yearly developing, and has now attained an excellence that at first the most sanguine scarcely hoped for. It has generally been considered a feeble grower, as well as small and unproductive; and from unfavorable circumstances such it *appeared* at the beginning. For a large price I procured in the spring of 1850, twenty-five plants which were so small and languishing in appearance, as to be regarded with despair, rather than pitying hope; and for two years, under the most tenderly cherishing nurture, my success was not very encouraging, even with those that survived; for with my best care, life had let go its feeble hold of some of them. After they became strong enough for layering, the progress of development was very encouraging; and each year has marked a decided improvement on the foregoing up to the present; and this has afforded the most gratifying result of all. For, notwithstanding the very unfavorable character of the season, not only have my own vines given better and handsomer fruit than ever before, and this uniformly on all my vines—those the second year from planting giving fine crops, and those planted this season (one year old at the time of planting) have given excellent specimens of fruit; and those to whom I have sent large vines, have expressed their gratitude to me for the same performance of their vines. This, although quite satisfactory, is far from the full capability of the Diana, for every well-treated vine improves for ten years from planting."

We find that a postscript to Mr. Downing's article has been omitted. It is as follows:

P.S.—I will here state that I have no vines for sale, and am not connected either directly or indirectly with any Nursery establishment. I say this, because it appears not to be generally known that I discontinued the Nursery business some five or six years since.—C. D.

AQUARIA.—Mr. Charles E. Hammet makes and furnishes Aquaria at Newport, R. I. His agent in Philadelphia is J. W. Queen, 924 Chestnut Street. It is rather amusing to read his *list of prices* of the living contents: Green weeds are 10 to 12 cents each; Sea Anemones, (Actinia) 12 to 75 cents; Star Fish 12; Serpula 12; Crustacea 12 to 37; Molluscs 12 cents to

$4.50 per doz.; Fish 6 to 50 cents each: all "according to kinds and quality." All appliances are to be had: as, net on copper wire with handle, 25 cents; copper hook on handle for arranging objects, 12 cents; spoon on handle for removing objects, 20 cents; real sea water, per gallon, 10 cents, and so forth. Soldier Crabs, King Crabs, Flat Fish and Sticklebacks, with "small Sheep's Head," and "small Lobsters," at "reasonable prices." It must be a novel feeling to those long neglected marine wonders to find themselves in "a lady's parlor," and the pets of a fire-side. At best it is only a little to be preferred, some experiences prove, to being boiled at once, for want of proper care.

ASTONISHING.—The following letter was actually received at the Post Office, Fishkill Landing, N. Y., the past summer.

MIDDLETOWN POINT, N. J. August 30, 1858.

ANDREW J. DOWNING, ESQ.,—DEAR SIR.—If it is not trespassing too much upon your kindness you will confer a *great* favor by forwarding two of your autographs, as a friend and myself are collecting autographs of distinguished persons, and would be much pleased to have yours grace the number. With respect, I remain yours, &c.

We hope not be offensive if we remind this toady of knowledge, that the pursuit he is engaged in is one of *utter folly*, when it is not accompanied by information and good sense; it might serve him the same useful purpose to collect horse-shoe nails, or as a numbscull once did in England, make a *complete* volume of turnpike tickets!

The French peasants, it was said, voted for their model emperor under an impression that he was the "little corporal," still alive, and the next we hear from the fountain head, will be advertised letters for General Washington, Presidents Jefferson, Madison, &c., requesting their autographs for a collection of "distinguished persons." The only excuse we can make for this kind of nonsense is, that it is undertaken, as we believe it sometimes is, by schoolboys; but even then they ought to be well castigated when they do it so ignorantly. What pleasure or food for the mind can a "collection" made in this way be to the possessor? Just about the same as the geological collection, every item of which was labelled by its young lady owner, "N. K.," and when asked what that meant, she replied with astonishment, "Why, Natural Kuriosity, to be sure."

SUCCESSFUL canvassers frequently remit nobly; Mr. John King, of Dubuque, Iowa, sends $20 for ten new subscribers, taking back numbers, and says this is the result of "one hour's exertion." He also says, he has raised about two acres of very fine Catawba grapes, the present year, excelling the Cincinnati grapes. "We are going into business quite extensively. The lead mining region seems well adapted to the raising of this delicious, healthy, and beautiful fruit."

TRAVELLERS.—What a pity that so many travellers leave home without any knowledge of science. Geology and Botany should at least have some entrance in their brains, before they attempt to enlighten the public. We make these remarks in consequence of having attempted to peruse a book, entitled, "From New York to Delhi, by way of Rio Janeiro, Australia and China." Published by the Appletons. The young writer actually remarks of the vegatation of Australia, and it is all he says about it, thus:

"Sydney has the advantage of a finely kept park, consisting of about 30 acres, inclosing a botanical garden in which are the plants of all climates, *growing side by side*, in the open air. The oak, however, and other Northern trees do not seem to thrive, all the specimens I saw being puny and stunted."

Why, did the writer know that he was surrounded by a flora the most wonderful in the world? It is remarkable that he recognized even a stunted oak. In the Himalaya Mountains he does not think of the rhododendrons, probably had never heard of such a thing. In China the same deficiency. In Rio Janeiro: "I saw much coffee growing; *it looks like a hardy plant*,

and did not seem to have been carefully cultivated. Banana trees, of course, to be seen everywhere, being somewhat of a weed among the trees." Had he been a little keener, he might have learned that the coffee tree will not grow in the blaze of the sun, and that the banana is *planted* to shade it, and thus to obtain two crops. The banana "somewhat of a weed"!!

CUPHEA EMINENS.—This fine plant has bloomed with us the present season in very great perfection; it makes as fine a green-house plant as can be desired. Will our friends in Boston take notice of this fact?

GARDENS.—At the late meeting of the British Association, Mr. Ward urged the importance of cultivating a taste for legitimate horticultural pursuits among the members of the laboring population, as it was a well-established fact, that whenever a pink, or a carnation, or a rose was seen outside a cottage, there was a potato or a cabbage for the pot within; that if there were not happiness, there was the nearest approach to it in this world, content:

Yes, in a poor man's garden grow
Far more than herbs and flowers,—
Kind thoughts, contentment, peace of mind,
And joy for weary hours.

MILDEW AND RED SPIDER.—We understand that there is great probability of an effectual remedy for mildew and red spider having been discovered, wholly free from the objections attaching to sulphur either in powder or in a volatile state. How valuable that agent is we all know; but it is troublesome to apply, uncertain in its action, and, if mismanaged, more mischievous than the evils it counteracts. As for example when it is fired, the effect of which is to charge the atmosphere with fumes of sulphurous acid, one of the most fatal to vegetation of all known substances.

At present our information amounts only to this: that Mr. Wilson, the very able and scientific manager of Price's Candle Company, has prepared a soap, which being dissolved in water and applied with a syringe does effectually and without the least risk, all that flour of sulphur can do. It is said that one of the principal nurserymen near London has been trying the soapy water, of different strengths, and is very favorably impressed with its efficacy. Six ounces of the soap in a gallon of water killed mildew for the time and continued to keep it down when applied weekly. Pot Roses after three applications became nearly clean, and were in fact saved; their soft young points indeed were killed, but that was of no importance; the rust of Moss-roses disappeared before its action. In other hands red spider was effectually kept down; 1 lb. of the soap dissolved in 4 gallons of water completely cleaned even Peach trees after two or three applications, the trees having been well syringed a day or two afterwards.

The name of this new soap or substance is, we are informed, "The Gerhurst Compound," and if it is found in other hands to preserve the good qualities now ascribed to it, Mr. Wilson will certainly have conferred one of the greatest possible benefits upon horticulture. A trial is about to be made of it in the Garden of the Horticultural Society, at Bowood, Trentham, Chiswick House, and several other large establishments; but, owing to the lateness of the season, we fear that no good results can be looked for at present.—*Gardener's Chronicle.*

RINGING THE GRAPE VINE.—Another report on Ringing Grape Vines has been supplied by Mr. Rivers with specimens of the result, which, as will be seen, is encouraging enough to justify further trial.

No. 1. A branch of Muscat of Alexandria, which had been ringed in a cold Vinery, produced a good bunch, nearly ripe, the characteristic yellow even appearing; the bunch on an unringed branch in the same house was much smaller and very far from ripe.

No. 2. A branch of Black Hamburgh produced a large well-grown bunch, but it was very badly colored, and far from ripe; an unringed branch bore a bunch intensely black and perfectly ripe, but not half the size of the other.

No. 3. A White Frontignan Vine that had been ringed produced two bunches nearly ripe, but smaller than usual; all the others shanked; an unexpected result, for Mr. Rivers informs us that at first nothing could be more promising than the appearance of these bunches. The shanking occurred all at once in one or two days.

If we regard the last case as inconclusive, the shanking being due, not to the ringing but to something wrong at the roots of a Vine very apt to suffer in that way, then it would seem that ringing has the effect of enlarging considerably the bunches, as was to be expected, from the inevitable accumulation of good sap above the ring and in the vicinity of the Grapes. Acceleration of ripening in the Muscats was counterbalanced by a retardation of ripening in the Hamburgh. The trial should therefore be renewed next year; and in forcing-houses as well as in a cold Vinery.—*Ibid.*

RINGING THE GRAPE VINE.—The last Gardener's Chronicle says:—

With reference to the experiments on Ringing the Vine, last week communicated by Mr. Rivers, that gentleman has sent us another bunch of Black Hamburgh Grapes which has evidently suffered injury; and he states that several more are in the same condition, while bunches on branches not ringed are all perfect and good. In the instance now before us we incline to the belief that the ringing has been too severe; either too deep or too broad, or both. For we find the wood below the ring very nearly dead, which would of course render it impossible for the Grapes to reach maturity. Undoubtedly the degree of ringing that may be allowed is a very important point for determination. Our own opinion is that *the ring ought not to be wider than is necessary to prevent the return of the sap by the bark, nor deeper than the bark itself, care being taken not to injure the alburnum.*

NURSERY OF L. V. HOUTTE, GHENT.—It is needless to say that this is one of the most important commercial horticultural establishments on the Continent. Visitors to Ghent make a rule to inspect it, and we never yet met with a lover of gardening who was disappointed. During the past summer it has had most formidable difficulties to contend with, now happily surmounted. Of all things water is the most necessary in gardens, especially on the Continent. M. V. Houtte found himself suddenly without any. The place had always been amply supplied by seven deep wells sunk some 20 years ago. These suddenly became dry. The water they had supplied had, moreover, deposited so much sediment in the pipes of his hot-water apparatus that it became choked up and would work no longer. Two important operations had, therefore, to be undertaken; to secure a new supply of water, and to reconstruct the whole heating apparatus of the nursery.

To obtain an unfailing supply of water advantage was taken of the dryness of the Scheldt itself to sink in its bed a huge coffer, the sides of which were pierced with holes. This was connected by means of a cast-iron 3-inch pipe 1900 feet long with a forcing-pump worked by a little donkey steam-engine, capable of throwing the water 26 feet high into a new reservoir holding nearly 9000 gallons. From this reservoir the water now flows through a fountain into a small "lake" which decorates the entrance of the establishment, and feeds 180 smaller cement basins all placed on the same level, whence it may be distributed over every part of the 8 acres, thus affording an effectual power of irrigation. We understand that some acres of Tea Roses and Rhododendrons which are thus flooded occasionally, are most grateful for the ammonia and phosphoric acid which the dirty lazy Scheldt conveys to them.

The new heating has been accomplished by means of the one-boiler system, for which Mr. Weeks was called in. Sixteen stokeholes to 16 boilers had been used. For these was substituted one stokehole and one boiler, with a boiler in reserve in case of accident. The other day, says a correspondent, "*on a mis le feu au poudre, tout se chauffait a ravir, et M. V. Houette était des plus satisfaits.*" The work was done, not only well at last, but satisfactorily from the beginning. Mr. Weeks's foreman showed that he perfectly understood his business, and this specimen of

concentrated heating has added another interesting feature to the great establishment in which it is placed.

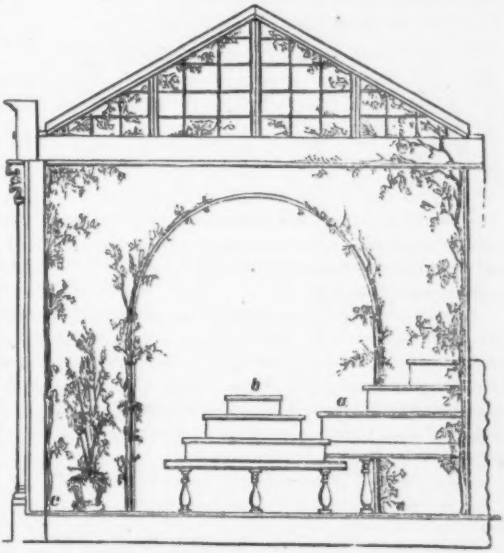
We learn that the *Flore des Serres*, the regular appearance of which has been arrested by the accidents thus described, is about to reappear with all its former punctuality.—*London News.*

ANSWERS TO CORRESPONDENTS.

BEE KEEPER. It has been ascertained that bees will work as well in hives of glass—say each side formed of four double parallel plates. As thus formed the escape of heat is so effectually prevented that the little fellows work without the necessity of covering the hive with any opaque material; and thus they are always open to inspection without being disturbed by the sudden emission of light into a hive previously dark. An interesting experiment which we have seen practised with bees is to empty an old sideboard, a thing now often "given away;" place it in a living room, bore small holes in the wall, put a movable glass plate behind each door and a swarm within each compartment; you have then the family within the house, and can look at their progress without leaving the house, and probably, if there is food enough in the neighborhood, cut your honey when you want it.

BEATRICE. The fugitive color called "ladies despair," produced from a lichen, has been successfully fixed by a silk dyer of Lyons, who, after five or six years' trial, has obtained a permanent dye, so that you may hope to have "more of it" from the shops.

W. T. W. The accompanying plan of the interior of a green house suitable for plants and ferns, is one admitting a great amount of light. The stages, fig. 1, *a*, *b*, display the plants to advantage, and would be equally adaptable with a little ingenuity, to either a lean-to or a span roof. The front sashes extend without interruption of timber or brick-work, from the roof to the ground. At the roof *c*, are placed the running vines, and pot plants set upon the ground. The heating arrangements should be a hot water pipe; this in a small building is sometimes carried through from an adjoining kitchen, and economy of building and fuel thus accomplished; a plan that, though rarely adopted in America, might be advantageously applied in many instances with effect.



CATALOGUES, &C., RECEIVED.—Annual Report of the Managers of the Chester County, Pennsylvania, Agricultural Society, for 1858, West Chester. A stately pamphlet and full of interest. This county takes rank in its intelligence no less than its valuable productions with any in America. They dont make quite so much *noise* about their sayings and doings as some others, but they are always useful and practical. The address is very clever.

Address on Horticulture. By David Thomas, Union Springs, New York. Printed by several friends of the author, and very properly, too, for it is so full of practical hints and suggestions as to deserve a more extended circulation, and we shall take pleasure in giving our readers, very soon, a taste of it.

Hooper and Brother's Catalogue. Cherry Hill Nurseries, Westchester, Pennsylvania. This is a portly and valuable catalogue, and we beg every one of our readers in "the region round about" to possess themselves of it before purchasing.

Address delivered before the New York state Agricultural Society at Syracuse, October 8th, 1858. By Joseph P. Williams, President of the Michigan State Agricultural College. Sensible, clever, and useful.

Catalogue of the Officers and Students of the Bordentown, New Jersey, Female College. Rev. John H. Brakely, A.M., President and Proprietor. A very successful institution, and deserving of the patronage it liberally receives.

Etablissement D'Horticulture de Portemer Fils, a Gentilly (Seine) rue de L'Hay.

The Covington Nursery; Catalogue for 1858. By Harry Camp and Son, Covington, Ga.

The Southern Nursery, near Covington. By Harry Camp, Covington, Georgia.

Catalogue of Fruit Trees, Ornamental Shrubs, &c., at Mattison's Nursery, Paducah, Kentucky.

Descriptive Catalogue of Fruits, Hardy Ornamental Trees, and Shrubs, of the Nashville Nursery, and Fruit Garden, Nashville, Tennessee. Louis C. Lisbly, Proprietor. A large and valuable collection.

Descriptive Catalogue of Fruit and Ornamental Trees, Plants, Shrubs, &c., of Pleasant Ridge Nurseries, Bendersville, Adams County, Pennsylvania. Thomas E. Cook and Sons Proprietors.

Catalogue for 1858 and 1859 of Gloaming Nurseries, Clarkesville, Georgia, by James Van Buren. Excellent.

"What may be learned from a Tree," is the title of a forthcoming volume by Harland Coultas, a botanist; he has issued a specimen of the first pages, which promise entertainment as well as information. It is to be published by subscription in Philadelphia.

THE NEW EDITION of Downing's Landscape Gardening, will be published in February next.

SIR WILLIAM J. HOOKER.—We learn with pleasure that Sir William Hooker contemplates paying a visit to this country the ensuing season. He will be warmly welcomed by his many friends, and by those Americans who have been the recipients of his attentions at Kew Gardens.

Grape Vines, Trees, &c., cultivated and for sale at the East Camp Nurseries. Wm. Tompkins, Germantown, Col. County, New York. Mr. Tompkins advertises 12,000 Grape Vines at reduced prices, with a great variety of other fruit, and ornamental plants and shrubs.

Landreth's Rural Register and Almanac for 1859. For gratuitous distribution. As usual filled with valuable information, practical and to the point. Every rural home should have it hanging for reference where all could have access to it.

Gossip.

MELONS.—The most surprising plant of the Desert is the 'Kengwe or Keme' (*Cucumis caffer*), the Water Melon. In years when more than the usual quantity of rain falls, vast tracts of the country are literally covered with these Melons; this was the case annually when the fall of rain was greater than it is now, and the Bakwains sent trading parties every year to the lake. It happens commonly once every 10 or 11 years, and for the last three times its occur-

rence has coincided with an extraordinarily wet season. Then animals of every sort and name, including man, rejoice in the rich supply. The elephant, true lord of the forest, revels in this fruit, and so do the different species of rhinoceros, although naturally so diverse in their choice of pasture. The various kinds of antelopes feed on them with equal avidity, and lions, hyænas, jackals, and mice, all seem to know and appreciate the common blessing. These Melons are not, however, all of them eatable; some are sweet, and others so bitter that the whole are named by the Boers the 'Bitter Water-melon.' The natives select them by striking one Melon after another with a hatchet, and applying the tongue to the gashes. They thus readily distinguish between the bitter and sweet. The bitter are deleterious, but the sweet are quite wholesome. This peculiarity of one species of plants bearing both sweet and bitter fruits occurs also in a red eatable Cucumber often met with in the country. It is about 4 inches long, and about 1½ inch in diameter. It is of a bright scarlet color when ripe. Many are bitter, others quite sweet. Even Melons in a garden may be made bitter by a few bitter Kengwe in the vicinity. The bees convey the pollen from one to the other."—*Livingstone's Africa.*

GRAPE VINES, &C.—The quality of a particular vegetable is not unfrequently affected by external influences so that it assumes a different character, which is distinctly imprinted upon the leaves or other parts, and may even to a certain extent be perpetuated. This property for the most part belongs to all organic bodies, and may be observed equally in the animal as in the vegetable kingdom. The dog is always a dog, but the Newfoundland and the lap dog, the sheep dog and the greyhound, differ from one another in no small degree. The cow is everywhere a cow, but differs in form in every part of the earth in which she is found. Plants being still more dependant upon external influences than animals (which are restricted to no particular place), exhibit this peculiarity in a very high degree. The varieties of Geranium, Pelargonium of the Rose and Dahlia, which belong nevertheless to one genus, are unlimited. The difference is often impressed still more markedly upon the fruits which the plants produce. There is, indeed, an identity in the nature of Apple-trees; but any one, however ignorant of botany, can distinguish numerous varieties of this fruit, varieties not only of form and size, but also of color, taste, and smell. The Vine ranks among those plants which are very dependant (at least in so far as regards the fruit it produces) upon external influences: color and size, form and taste, aroma and productiveness, vary in this case in so remarkable a manner as might lead one almost to regard the Vine as a peculiar gift of the Creator's bounty. Should the reader wish for an example of the immense variety of Vines, we will only remind him that Chaptal, when Minister of the Interior, caused 1400 different species of Vines to be transplanted out of France alone into the garden of the Luxembourg. The like variety may be observed not only in Grapes which have been grown in different parts of the earth, but even in those produced in the same country, and growing on the same spot. And, indeed, though less strongly marked, we may perceive a like difference even in the Grapes of one Vine. Protect one cluster of Grapes from too great exposure to the action of the sun, and cover it with a bell of dark glass, or with oiled paper, while you leave another exposed, and you will produce a much more finely scented fruit in the former than in the latter. It is not, therefore, strange that the Grapes which grow on the sunny side of the Johannisberg should be very superior, as far as the flavor and fragrance of their juice is concerned, to those produced on the opposite side of the mountain; nor that, in general, a hotter and stronger wine is produced in warm regions than in such as are cold or temperate. If we add to this, that the peculiar nature of the soil, its constituents, the influx and drainage of water, the lightness or stiffness of the ground in which the roots spread; that further, the dryness or dampness of the air, and the change or equality of temperature, exercise a well-known influence upon plants and the fruits produced by them, we shall at least have a general idea of the varieties of the juice which constitutes the principal element in these berry-bearing fruits.—*Professor Mulder on the Vine.*

WHY WHITETHORN IS QUICK.—The best answer to this question is, I think, one given by a

facetious botanical friend, whom I will designate "Treverbin," who, on being asked why Whitethorn was called "Quick," answered, "I believe because Blackthorn is called 'Sloe.'"—*J. T. B.*

MR. CUTBUSH'S PRIZE FOR DIOSCOREA *at the Horticultural Society's Exhibition, St. James's Hall.*—I fear that some misunderstanding has arisen regarding the prize I offer for 20 Dioscorea Batatas. I distinctly stated that it should be given for the best 20 roots from sets not weighing more than 1 oz., and planted in the spring of 1858. I have heard that several parties intend to put in competition roots from sets planted the year previous; if allowed to do so my object will be entirely defeated. Do we plant Potatoes, Carrots, Parsnips, or any other like vegetable to remain two years before being dug up for use? I want to have practical illustrations of my theory that this Yam will do in almost all soils, provided there is sufficient depth. My experience is that wherever Carrots succeed the Yam will also thrive, and I am sure that it would be a profitable crop. All we have to do is to convince the public that it is a first-class vegetable, and create a demand for it; but I invariably find more difficulty in persuading people to purchase anything new in the culinary department, than in any other branch of our business.—*James Cutbush, Highgate Nurseries, Nov.* 2.

HOW TO SAVE LEAVES IN WINTER.—Sweep them up when dry. Keep the Oak leaves by themselves if you can; for they don't make such good leaf-mould as others. Burn Fir leaves. Keep the leaves as dry as you can by packing them close in dry weather against your pits, if you want the leaves to keep frost out; and put over them a sloping roof of mats or old boards, or something of that kind. So managed, they will keep off very bad cold. If they get very wet they are not of much use. If you don't want them for pits, put them into a shed. You may get some early Seakale or Rhubarb by burying the old roots among dry leaves. When the winter is over and you want a little bottom-heat for your frames, leaves are useful for mixing with stable litter. Half and half is not too much. A Cucumber bed made up so will give a nice mild heat. What leaves you don't want for this should be thrown up out of doors for the summer, to take their chance, and by the autumn all except the Oak leaves will be crumbled to powder, and make famous leaf-mould. But they should be turned over two or three times during the summer.

MUCK AND PEAT—*Prof. Johnson's forthcoming Report.*—It is known to our readers, says the Homestead, that Professor Johnson has been employed in the examination of the mucks, peats, and swamp deposits of our State. We have been publishing from time to time such of his results as he has deemed desirable to furnish, to awaken interest and secure the attention of farmers to their own advantages, which might otherwise have been neglected. A large number of peats, etc., have been examined, and now he is ready to make up his report to the State Society.

COAL AND IRON have been formed, according to the most modern ideas of science, thus:—as the earth's crust cooled down from its state of incandescence, incalculable quantities of free oxygen must have been withdrawn from the air, and imprisoned in the oxydization of its mineral elements, with a force which no subsequent natural agency, at any rate upon a large scale, has been able to loosen. The vegetation which supervened, stimulated to high luxuriance by the fine *bottom heat* and reeking atmosphere of those times, began to repair this loss by decomposing the carbonic acid of the air, and thus increasing the relative amount of its oxygen. Thus the beds of iron ore and of coal, which accompany and overlie each other on the earth's wind, have withdrawn from the original atmosphere, the one a portion of its oxygen, the other a portion of its carbonic acid. When we would obtain the former in its primitive and useful state, we mingle the ore with the coal, and drive off the oxygen, surcharged with carbon, again into the air from which both originally came, by the aid of the heat which the vegetables that gathered the carbon had absorbed from the sun's rays. The idea that plants absorb light and

heat—a true force, from the sun, as well as that they constitute a deoxydizing apparatus, reducing the oxydized products of animal life—is claimed by Dumas and Boussingault. The latter promulgated the opinion that plants absorb light and caloric, only so lately as in the year 1837.

It is now a familiar fact, that plants are the great, the sole, producers of animal life. They alone convert the materials furnished chiefly by the atmosphere; they *condense air* into organized matter. While plants thus produce on such a grand scale, they consume or destroy comparatively little. Even when they do consume their own products, it is not in the mere vegetation, but in the accomplishment of some special results, chiefly in flowering. They often seem to *consume*, when they only *transform* and *transfer*. When they apparently consume the nutritive matter accumulated in the root of the Carrot, for instance, or the tuber of a potato, they in fact transform it, for the most part, into branches, foliage, and flowers. Animals *consume* what vegetables *produce*. When the farmers along our sterile coast manure their exhausted lands with fish, they merely reclaim their own and bring back to the soil what has been washed into the sea. The earthly portion of the animal's bones, and the iron in his blood, are equally drawn ready formed from the earthly constituents of the vegetables upon which he feeds. The animal merely accumulates these materials, changing them, it may be, little by little, as he destroys them, but giving them all back, finally, to the earth and air. Literally, then, "all flesh is grass." The wants of the animal kingdom were all prospectively provided for, when to them was "given every green herb for meat." One of the modes of fishing in China, according to Mr. Fortune, is curious; the men wade into the water, and strike a harp below upon the surface with their hands. This frightens the fish, which dive into the mud, and the moment the Chinaman feels one touch his feet, he himself dives also, and soon reappears holding up his prey with an air of triumph.

Correspondence.

Our London Correspondence.

Mr. Editor.—The gardeners of America should be interested in what is transpiring here, as well as in their own country. True, the climate is somewhat different, and practice has to vary accordingly; but it is also true that the efforts to procure new plants from all parts of the world, aided, as they are, by the steam marine of this country, often present us with novelties that your gardens should possess; and there is a great amount of intelligence and capital engaged in horticultural pursuits. In fruit culture and an extended knowledge on that topic, the people here may learn of you. So, while an interchange of knowledge is going on, a note now and then may not be unacceptable to *your* readers. The *Horticulturist* is sprinkled about among our amateurs, and is much read. The American subscribers sometimes forward it to their friends, while others are regular subscribers.

Kew looks better than ever, and is wonderfully attractive to all who feel an interest in botany or gardening. The season of flower-shows at the Crystal Palace is over, but these exhibitions have been among the most attractive and profitable to the Company, while their large premiums have stimulated rivalry, and enriched the successful competitors. The Palace company is not pecuniarily successful, but there is a pride felt in its results that will keep it going.

It is not a little remarkable, that while the palace does not pay, another company has issued a prospectus for a second, to be placed where it will be more accessible to the great body of Londoners.

The Messrs. Henderson, at St. John's Wood, have recently received many new camellias from China, and great interest is felt for the novelties expected to be found among them when they

bloom. These gentlemen are especially successful in the cultivation of Lapegeria rosea, which I do not remember to have observed frequently in America; they plant them in a mixture of rough pieces of turfy loam, peat, leaf mould and sand, when they throw out shoots like asparagus, rejoicing in warmth, and very vigorous. Mandevillia suaveolens, planted in a border with a south aspect, becomes a lovely climber; here it requires only the protection of a little dry hay and a mat during winter, if the soil is drained. The Gardenia citriodora is proving very valuable, and the mules or crosses between Gloxinias and Gesneras, are attracting attention.

It may be new to some of your readers to learn that strawberries are readily produced from cuttings. A gardener having prevented his forced plants from throwing out runners, shook them out of their pots, and divided the crowns, making two, and sometimes three cuttings of one old plant. The roots were pruned away, and the old leaves also, and each cutting was put into a small 6's pot, in leaf soil and loam, placed in a frame, and kept close for a week; they soon commenced to grow when more air was given. In three weeks they were fully exposed, having then filled the pots with young roots, when they were planted in fruiting-pots, and are now in no way inferior to plants from layers. The strawberry may be propagated in this manner when desirable. Vilmorin, of Paris, has just sent out a new strawberry catalogue of new and old kinds; the whole comprises 74 sorts. For forcing he recommends Myatt's, Queen Victoria, Black Prince, Princess Royal, Sir Harry, and Keen's Seedling; among others, not for forcing, he recommends Elton Pine, British Queen, Omar Pacha, Kitley's Goliath, and Nimrod.

We have a novelty in a Lattice plant, the Bernieriana, differing somewhat from the Fenestralis, chiefly in the leaves being larger (from one and a half to two feet) and narrower in proportion; the reticulation being smaller and the color a brighter green. It is from Madagascar. The Horse Chesnut of California, Æsculus Californica, is attracting attention. It is very ornamental, and if hardy will prove an acquisition to the shrubbery; the leaves are smaller than the old kind, and the blossoms more numerous; in dense spikes, greenish white. The beautiful Datura Wrightii, with its enormous flower, white shading into lilac, is a great favorite, and Clematis lanuginosa is much employed.

One of our best conducted London papers estimates the refuse of London is worth ten millions of dollars a year, but the state of dilution in which it exists is a bar to its extended use; more the pity, for while we go to the great expense of importing guano, an equally valuable fertilizer is thrown away. Efforts are however making to retain the refuse of certain factories, slaughter houses &c., and to make it into artificial manures, on whose strength the chemists keep a bright lookout.

We are here much in the same condition with regard to the Chinese Yam as yourselves. There are many who think well of it, and probably I may soon report it as a success.

You will probably see in the English Journals an account of some enormous Perry pear trees, but lest you should not, I copy it as follows:—

In one orchard there are now growing 10 sound Perry Pear trees, whose average circumference three years ago, at between 2 and 3 feet from the ground and below the graft, was 9 feet 4½ inches, but taking the three largest trees separately, above 11 feet; the circumference of the largest tree was 11 feet 3 inches, that of the smallest (of the whole number), 7 feet 4 inches, and they are all of them of the very fullest height and span, the span of the largest 60 feet. A few years ago the largest branches of the largest trees, for a sadly fallacious reason, were cut off, before which unjust treatment they produced an average crop of a ton of Pears of the noble kind called Huffcap, the flavor of which, though rough and wild, is full of fine aroma; but one of them, and not the largest tree, is known to have yielded in one season 2 wagon loads=20 sacks=100 bushels=2 tons=4 hogsheads of Perry Pears."

Steam plows are the talk in Agricultural circles, and are considered moderately successful. We rather look for their improvement to come from America.

I sent from Paris a box of French pears, which I trust arrived in good order. [Yes, in the main, though one third were decayed. They were large and fine, some specimens especially. ED.] You would scarcely know Paris; the last few years have produced an immense change. The Bois de Boulogne, extending from the Triumphal Arch five miles, is wonderfully remodelled and embellished, and is well kept; it may be considered, notwithstanding its want of large trees, the most ornamental piece of ground in Europe for its size. There is a mass of artificial rock-work on a gigantic scale; the rocks were taken from Fontainbleau, are of immense size, and most artistically put together. The grounds contain a good piece of water, but the banks want boldness. The climate here is more favorable to bedding-out plants than that of England, and the gardeners do certainly understand how to blend colors; their plats are a blaze of glory. You will be surprised to see the asparagus plant used for ornament; but so it is: they plant it quite young, between rows of bulbs, and the feathery spray of the grass forms a bottom to the beds, and hides the long stems of the flowers, besides forming a good contrast. I wish you could see some of the new orangeries erected here lately, especially that of Baron Rothschild at Suresnes near Boulogne; where he has magnificent gardens, and the finest "ribbons," without the formality of the English. One border had an ivy edging 12 inches wide; next a row of Phlox Drummondi pegged down; next white petunias; then scarlet geranium, followed by the orange erysimum and white chrysanthemum, backed by blue salvias and gladiolus, which formed the centre of the bed.

I shall occasionally drop you a letter, and am as ever, yours, HORTULANUS.

London, December, 1858.

PEARS.—As to the article page 541, of December, let me remark that: Mr. Morton seems not to well understand the planting of Dwarfs; the remark page 542, where "Mr. Menaud thinks well of Dwarfs if planted deeply," seems to imply it.

Page 543, Rev. D. Ide asks "Why not plant pear stock alone, instead of waiting for the throwing out of *artificial* roots above the quince stock?" Why? because the natural pear stock from wild seed will take from 10 to 25 years to come into bearing. It is a completely organized tree, with the embryo of all its constitutive parts contained in itself, while the *affraenti*, or artificially rooted *branch*, is deficient in the laws of the true constitution of the wild tree, and is only an artificial product, and, as such, more disposed to bear or mature than the perfectly organized tree, from the hands of nature, that is, from the embryo of the seed.

That we can not have all things combined to our satisfaction and to our views of accommodation and perfection, is an old truth which applies as well to men as to pear trees.

He then, who will have his trees of strength to withstand *hurricanes*, the quality of bearing "20 or 40 bunches," may and must plant trees grafted on the wildest stock, and may have to wait for the products some dozen years or two. I know of some seedlings which yielded their first crops the 32d year after they were planted as a pit or seed. The more vigorous they are, the more will the maturity or *virility* of the tree be retarded. Take your choice then. "Wait *or* labor." Wait and let the *stock* alone; attend and nurse the artificial being, from which you expect products that you never ought to see during your life time from the first.

After all the "pour et contre" of the question, it seems to be a fair conclusion to assign to the quince stock a certain latitude, and certain atmospheric and humeric conditions, outside which, as so many other plants, *it must be a partial or total failure.* Twenty or thirty degrees below zero is too low a temperature for many, otherwise hardy, exotic plants.

If standards would only bear in ten or twelve years from the graft, and if I were younger and certain to live forever on the same spot of ground, I would plant more Standards, but in this country a man has hardly time to plant a tree. To tell him to wait 20 years for a crop would make him laugh. The time is no more when the Huguenots, and the First Settlers of Jersey and Pennsylvania, considered the land of refuge as their permanent home, and planted orchards

for their grand children; no body seems to care now to plant Apple orchards, and if the quince had not interfered with the planting of pears, perhaps we should not have as many pear trees as we have English walnuts or French chestnut trees in our middle States.—L. E. B.

LEWIS F. ALLEN and the Pear Controversy. In the February number we shall publish Mr. Allen's reply on this subject. The public will arrive at the truth in the end, and hence the value of free discussion.

A FEW weeks ago, says a correspondent, "I visited Newburg and Iona, with a view to satisfy myself as to the real merits of the Delaware grape vine; as to its fruit, most of us agree that it is the best American grape we have; but its feeble growth has been a serious drawback. All this arises from an erroneous system of propagation. In the vicinity of Newburg I found the Delaware in every instance a strong grower, and great bearer, single vines there growing into three years, with fifty square feet of trellis covered, and bearing from fifty to one hundred bunches, and such bunches! the figure in the book is but a poor representation. At Dr. Grant's, on the Island of Iona near Peekskill, with whom I spent a very pleasant day and night, I found the Delaware even still more vigorous, if possible;—vines three years old, with three, four and as many as six shoots to a vine, that it would take a ten foot pole to reach to the top; stout, short-jointed wood. There were also 48 or 50 vines which Dr. Grant had procured somewhere, of an age similar to those of his own growing, side by side; one vine of his had as much young wood upon it as the whole 50 of the others. Such vines as those 50 above mentioned are the kind we have been treated to, to the tune of $3 and $5, which accounts for the complaint about its feeble growth, and whenever I heard it discussed, my voice was against it. I would rather pay $5 per vine such as I then saw, than to plant such as usually were sent out, if given to me.

The Diana has done splendidly there also,—such tremendous growths, and such large compact bunches of luscious fruit,—the berries as large as Catawba.

The Anna Grape was there in perfection, large as Catawba, white and of extraordinary beauty, with an aroma that will not soon be equalled in an American Grape. Hardy, and a good grower; quality very good. The everbearing Mulberry is also to be seen there in all its glory, growing more like reeds than a shoot of a tree; growths 15 feet of the present season, with beautiful foliage; would make an ornamental shade tree independent of its fruit, which is excellent, and which was in eating 10 weeks this season; I ate of them on the last day of August, and never tasted a better mulberry.

Should you think proper to give this a place in the *Horticulturist*, it may do something to revive the grape spirit in regard to the Delaware, which was really falling into disrepute in many places, on account of its feeble growth. The whole mystery lays in starting with healthy, vigorous plants, if you wish to succeed.

P.S.—On the 15th day of September, I brought with me from Iona ripe Dianas and Delawares. The Anna almost ripe, also.—S. M., *Calmdale*."

CHICAGO, ILLINOIS.—Mr. Editor:—In June, 1857, I built a small vinery for the Hon. J. N. Arnold of this place. It being the 28th of May when we commenced, there were doubts as to the canes ripening so as to withstand our changeable winters, as there is more to fear from sudden changes than severity of frost. It was a lean-to, covering the south side of the barn or carriage house. We have excellent drainage and soil. In making the border we covered the surface with 18 inches of prairie loam and cow manure, 10 bushels of bone-dust from a button factory, two barrels of leached ashes and lime from a soap and candle factory, and applied soap-suds in the summer while the vines were in a growing state. The size of the house is 24 by 14, and 14 feet in height at the back, with 6 feet in front. The front sashes are hung on hinges at the top for ventilation. Mr. Arnold was so well pleased with the growth in this small vinery, that he has erected a larger. I have taken, as you will see by Emery's Journal, the first premium for samples of cold vinery grapes grown on plants two years old. They

were in competition with grapes from older vines and more costly structures. My calculation in the same Journal of the profits of grape growing, is as follows:

DR.

Cost of grapery and border	$100
Interest two years	20
Attention during two seasons of one hour each day at $2 per day	72
Ten per cent. per annum on the cost of the house for wear and decay	20
Cost of vines and expressage—24 vines at 50 cents	12
Rent of ground	2
Manures	5
Tools, including syringe, cords, &c	4
Total	$235

CR.

250 pounds grapes, at Chicago prices, $2 per lb	$500
Profit	$265

We fruited twelve of the vines, and have the other twelve ready for a heavy crop next year. In my estimate, I have given more than the actual cost to the present time, and now have my vines, two years old next June, and the house left for future profit, besides the $265 in cash, which might easily have been obtained as profit on the fruit, and the real pleasure which grows out of the cultivation of such fruit.

The varieties fruited were the Old Black Hamburg, Golden Chasselas, Chasselas Musque, Muscat of Alexandria, Wilmot's Black Hamburg, Royal Muscadine, Black Prince, Grizzly Frontignac, Zinfindale, and a few other varieties. Of these the Zinfindale and Black Hamburg fruited heaviest. The vines, obtained of Ellwanger and Barry, Rochester, New York, proved true to name and came in excellent order. Is the reader satisfied as to the profit of graperies?

There are only eleven vineries in Chicago, but several are going up this winter. I recommend fruiting the second year, and it will pay, as it is very difficult to get gentlemen to wait three or four years. I prefer planting double thick, fruiting half of these, and then cut out those that have fruited heavily.—J. C. URE.

NEW REMEDY.—At a late meeting of the Academy of Sciences at Paris, M. Millot-Brule exhibited a black powder, obtained from a purely natural substance, which, should it come into general use, will gladden the hearts of gardeners. If you have a plant or shrub that you wish to preserve from noxious creeping things, you draw round it a circle of this black powder, and not a snail, or slug, or worm, or maggot, will attack it; for no sooner do they touch the black powder than they are thrown into convulsions, which speedily kill them off. A whole bed or plot may be sprinkled with it, and with the like results, and without injury to the garden. On the contrary, the powder is a good fertilizer. It is said to be a specific against the grape disease, and if blown lightly into an affected bunch, the *oidium* or fungus is seen to curl up and perish—killed as surely as the snails.

The composition of the powder is no secret; it is nothing but a species of lignite—sulphur-coal, as the Germans call it—ground fine. Large beds of it exist in many parts of the continent. Ardennes abounds with it; and it was with lumps dug from that region that M. Millot-Brule made his experiments. It is found in extensive deposits at Oppelsdorff, near Zittau in Saxony, where for some years past it has been turned to account for the preservation of timber. The sulphur-coal, to give it the local name, is reduced to powder, and made into a bath with water. The wood to be treated is plunged into this bath, and left there for a time without any mechanical pressure, until it has undergone a change which partakes of the nature of mineralization. Mere contact with the lignite appears to suffice; and we are told that beams which have been used in the works for thirty years, are sounder and more likely to last now, than when

first put up. In Saxony, the railroad sleepers are prepared with this substance, and with manifest advantage. Would it not do well for ship-timbers, docks, and water-side constructions generally? SAMPSON.

HOW CAN PAINT BE REMOVED FROM BRICK WALLS!—*Mr. Editor*:—I have a brick house, which has for forty or fifty years been covered, at intervals, with a succession of coats of lead paint of different shades of color.

If any reader can tell how to remove it, and leave the bricks bare in good condition, as they were before the paint was first applied, and will give the information by a few lines in the *Horticulturist*, he will probably oblige others beside the present writer. O.

To the Editor of the Horticulturist.— Dear Sir:—I was happy to notice in the October number of the *Horticulturist*, the proceedings of the Pomological Convention, held in New York in September last; and that under the head of grapes, the Hartford Prolific Grape was discussed so generally, and was put on the list of those promising well. Think if it had gone on the list of general cultivation, it would have had no more than it deserves. It has been the best grape I have raised for a number of years; ripens two weeks earlier than the Concord, and for this reason, if no other, should be on for general cultivation. And then it is more prolific, and for flavor, equal, if not superior, to the Concord. I trust, ere long, we shall see it receiving the attention it merits. Yours,

Springfield, Oct. 10, 1858. A FRIEND OF THE HORTICULTURIST.

J. J. SMITH, ESQ.—Numerous paragraphs about lawns in your journal, invariably recommend "Dutch clover;" this may be very good if you are sure of getting the true seed. My experience would caution lawn makers to beware!

Three years ago, I operated for a lawn, (secundem artem) which I suppose means after the best and most current notions. With blue grass, red top, and Vernal grass, I sowed Dutch clover. The result is an eye-sore, an abomination, and a constant annoyance. The "Dutch clover" you commonly get at the shops is "Lucerne," a rank grower, and on a lawn a perfect weed, making six inches growth while other grasses make one. "Swift's Lawn Cutter," a capital tool by the way, wont touch it; and nothing answers but the scythe, which is no small job for a four acre field or plot.

Brother rurals, keep "Dutch clover" out of your lawns. Our native white clover is indigenous, comes of itself, and is a thousand times preferable to your "Dutch clover."

Canandaigua, N. Y. HOMESPUN.

BAGLEY'S PERPETUAL RASPBERRIES.—This variety, originating in New Haven, Conn., has been cultivated four years, and has proved itself one of the best raspberries for market and private gardens. It is perfectly hardy, and needs no protection during the winter. The stalks are about four feet high, and form a beautiful branching bush that supports itself, and needs no stakes or training, and is entirely smooth, and free from prickers. The old stalks bear a bountiful crop of delicious fruit during the month of July, when the new canes commence bearing, and continue to bear until frost; the same stalk bears another crop the following year. The flavor of the berries is as racy as that of wild raspberries, and the variety, on this account as well as for its hardiness, has rapidly come into favor. It may be procured at Bridgeman's, No. 876 Broadway, New York. JEUNESSE.

WARMING A FORCING-HOUSE.—In reference to the plan in the last number, we are enabled to present the following testimony from a distinguished source:

MR. DANIEL BARKER:—You ask my opinion of your plan for warming a forcing-house. It is with great pleasure that I can conscientiously give you a favorable opinion. Your plan is very simple, convenient, and seemed economical, and it was certainly very successful. Your location was much exposed to our cold westerly winds, yet I remember that you had cucumbers large enough to cut for table use, on the first of March, and that the vines, as well as your young

melon plants, tomatoes, (then large and setting for fruit,) strawberry plants, and young grape vines, all appeared remarkably luxuriant and healthful. I have never seen elsewhere than in your forcing-house, the last of March so successfully changed into the middle of June.

Utica, N. Y. Yours truly, D. S. HEFFRON.

MR. EDITOR:—The best mode of preserving fruits and such perishable commodities fresh and "as good as new" for a length of time after gathering, is a subject as yet but little understood, though of unquestionable importance. The writer has been for some time past looking for something in our Horticultural Journals, in regard to Schooley's patent process which claims to answer the desired end perfectly.

Finding nothing in the papers, I wrote to a well-known eastern Horticulturist who has tried that process for two seasons or more. From his reply we give the following extract, *hoping it may call out further information.*

"The only difficulty with Schooley's process is the waste of ice, so that when the warm days of October and November arrive we are generally without it.

"If we can carry our fruits through the warm days, there is no difficulty in keeping them through the succeeding months. My ice lasts until October 1, and the room is a real luxury to the family. Strawberries keep well for several days, and I have kept them for three weeks tolerably perfect. Other fruit, such as peaches, plums, nectarines, pears, keep (in the hottest weather) 15 to 20 days.

"There is no danger of cold from the ice, the mercury never falling below 34° with me until winter weather, when I remove my fruits to the fruit room in the house, a room in the north-east corner of my cellar, with insolated walls.

"As to draught, this must be regulated by the ventilator in the door or wall." On another subject he adds: "Pears are very high in this market. They command $25 per barrel for fair quality. I have known a peck of B. Bosc sold for $7, and a bag of B. Diel for $10."'

Bloomington Nursery, Illinois. F. K. PHŒNIX.

MY DEAR SIR:—I send herewith some White Apples unnamed, received in a box of vines from Mr. Samuel Miller, who requested I should transmit them to you (excellent; Editor).

Mr. Miller sends me very fine layers of Dr. Grant's new vine, the Anna; also of Louisa, Emily, Mary Ann, and Clapier; from Mr. Read I have splendid layers of Canada Chief, B. Hamburg, and Secord's Sweetwater; and from Dr. Grant equally fine ones of To Kalon, Anna, Rebecca, Delaware, Herbemont, Diana, and Concord. I hope to give you a taste of some or all, next season, grown on my own well-prepared ground. H.

EDITOR HORTICULTURIST:—The following remarks though, they have appeared before in a newspaper, are applicable to all sections of the country, while perhaps the fruits named may succeed best in Eastern Pennsylvania and similar climates. The subject brought before the Pomological Society by S. Walker, at its last session, with respect to having local lists suitable to different states and sections, will eventually force itself upon the attention of all intelligent cultivators, who will find by experience the list of fruits "recommended for general cultivation," will have to be taken with many cases of exception in regard to the several localities of our great country; for while there may be many that seem to do well in nearly all situations, there are others that do not answer the expectations formed of them by seeing them thus recommended. Respectfully

Jenkintown, Penn. SAMUEL W. NOBLE.

VARIETIES OF FRUIT.—As the period for planting fruit trees will soon be here, a few words on the subject of varieties might be proper at this time; for no matter how well the ground may be prepared, how well the planting may be performed, or how well the trees are cultivated and attended to afterward, if the varieties selected are not suited to the locality or soil, the planter's expectations will be likely to be disappointed when the trees come to fruit.

With regard to the varieties suited to each locality, I may say, after all that has been recom-

mended by pomological societies and others, there is no certain guide but experience. Hence, each one intending to plant should look in his own locality and neighborhood, and see what varieties succeed there, and plant principally of those varieties;—or if he wishes a larger variety, plant a few of those recommended by friends and others by way of experiment; if they succeed, he has gained something for himself and others; if they fail, his experience will be of value to his neighbors if not to himself. As a case in point of planting without local experience, it was stated at the last Pomological convention in New York, by a member from a Western State, that his section had sustained great loss by planting apple trees of varieties recommended by the Pomological Society, that were chiefly of Northern or Eastern origin, naming five or six considered in the North and East as their best apples, as having failed to do well West. An apple that has originated in a certain locality and is found to suit in quality, time of ripening and bearing properties, forces itself as it were into notice, and is extensively planted; but if the same apple had originated in another section, it would never have attained the popularity it has in its native locality, because the time of ripening, its keeping, and very likely other properties which made it valuable where it originated, would be changed. For instance, the Baldwin and New England Russet are the best and most popular apples in New England, much valued for their long keeping. Now, if they had originated in Virginia, they never would have been much planted for their keeping qualities, for they are there a fall or early winter variety. So with those of Southern origin, as the Raul's Jennet and others; if they had originated in the North, they would not have been propagated, because they do not come to perfection there. Hence, if we want apples that will do well here, we must look principally to those varieties that belong to this section of country. Among the apples originated in Eastern Pennsylvania, and found to do well here, may be named the *Townsend* origin Bucks county, a good-sized striped apple, ripens late in summer; *Calf Pasture*, by some called Seek-no-Farther—but not the *Rambo*, which also goes under that name—a great bearer, and a good apple, ripens in early autumn; *Cornell's Fancy*, a very valuable apple, tree upright and of good growth, one of the best of its season; mid autumn;—*Smith's Cider*, which originated near Wrightstown, Bucks county; it was a chance seedling that came up in the woods on the property of one of the Smiths, and has for the last forty years been the most popular variety in Bucks county; an early and abundant bearer, and is well known in this section and should constitute one of the principal standard varieties in setting out an orchard here. A friend who planted an orchard of one hundred and fifty apple trees of selected fruit, about thirty-five or forty years ago, stated that he thought the twenty trees he planted of this variety had produced one-third of all the apples that grew in the orchard since it was planted. The *Fornwalder*, the *Princely*, and the *Smokehouse*, also do well here. There is one variety said to have originated in Virginia, and extensively planted out West, which appears, as far as tested, to do well here; that is, *Raul's Jennet* or *Neverfail*; the latter name has been given from the circumstance of the tree not putting out or blossoming until eight or ten days after the general blossoming of other varieties; hence the fruit often escapes being injured by the late frosts; it is a very productive and good keeping variety; and is *very valuable* in a season like the past one, when there has been nearly a total failure of apples of this variety, judging from the young trees that I have of this kind which are just coming into bearing, would have produced a crop, when all others blooming before this variety were cut off by the frost. The *Ridge Pippin* and *Cooper's Redling* are also valuable for their late keeping.

It is better, particularly for market purposes, to plant a few varieties of good bearing trees, ripening in succession, of fair quality, than a large number of fancy kinds, which perhaps are very good, but are not reliable. What I desire in the above remarks, is, to impress it on planters not to be too much taken by foreign fruits, with long names and captivating titles, which are often pushed into notice by interested parties and tree pedlars; and overlook those of home origin which are reliable.

CLARA

Lith. by Geo. Hayward 120 Water St. N.Y.